Index of Living and Fossil Echinoids 1924-1970

PORTER M. KIER and MARY HURD LAWSON

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ABSTRACT

Kier, Porter M., and Mary Hurd Lawson. Index of Living and Fossil Echinoids 1924–1970. Smithsonian Contributions to Paleobiology, number 34, 182 pages, 1978.—All new taxa of fossil and living echinoids described from 1924 to 1970 are listed with their age, geographic and stratigraphic occurrence, and bibliographic citation.

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Family Pericosmidae Lambert
Family Schizasteridae Lambert
Suborder MICRASTERINA A. G. Fischer
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Family Brissidae Gray
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Family Loveniidae Lambert
Suborder Asterostomatina A. G. Fischer
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Index of Living and Fossil Echinoids 1924-1970

Porter M. Kier and Mary Hurd Lawson

Introduction

Fifty years have passed since Lambert and Thiéry compiled their list of living and fossil echinoids. Since that time many new species and genera have been described. The result has been an increasing need for an update to this compilation. To satisfy this need we have prepared this supplement to Lambert and Thiéry's work.

The list was prepared from the citations in the Zoological Record from 1924 to 1970. Citations before 1924 are included if they were absent in Lambert and Thiéry. In every case we saw the original reference and checked for species that might have been missed. Where possible we have brought up to date the stratigraphic information; in particular we have tried to find the latest age determinations for the stratigraphic occurrences of the fossil species. No attempt has been made to revise the taxonomic assignment of the species because we felt it would have been necessary to see the type specimens. Time did not permit this. Our index has strictly followed the classification of the Treatise on Invertebrate Paleontology even where we disagree with it. Within five years we intend to publish a supplementary revision that will include all the new taxa for the years 1971-1975. For this reason we ask all users of this work to inform us of any errors, deletions, or additions.

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The present list is arranged by taxonomic hierarchy with the geological time sequence indicated by headings at the generic and specific levels. Within a generic or specific entry, brackets enclose locality information and parentheses enclose further levels of geological time or stratigraphic information.

Acknowledgments.—We wish to thank the staffs of the Smithsonian Institution and the United States Geological Survey libraries—in particular, Mrs. Carolyn Hahn and Mr. Jack Marquardt for their invaluable assistance in locating many hard-to-obtain books. We also thank Ms. Donna Copeland for typing this paper.

Class ECHINOIDEA Leske

Subclass PERISCHOECHINOIDEA M'Coy
Superorder MEGALOPODACEA Durham

Order BOTHRIOCIDAROIDA Zittel

Family BOTHRIOCIDARIDAE Klem

Genus Bothriocidaris Eichwald

UPPER ORDOVICIAN

B. eichwaldi Männil, 1962:152–156, 187–189, figs.
3b, 6, 7, 11, 12, 14–17, pl. 1: figs. 6–9, pl. 3: figs. 1–4, pls. 4, 5. [Baltic States, U.S.S.R.] (Pirgu Stage.)

B. parvus Männil, 1962:156–160, 187, 189, figs. 3v,8, 9, pl. 2: figs. 3–4, pl. 3: fig. 5. [Baltic States,U.S.S.R.] (Vormsi Stage.)

Genus Neobothriocidaris Paul

Ordovician

Neobothriocidaris Paul, 1967:535. Type-species: N. peculiaris Paul, 1967:528-531, 535, fig. 3, pl. 84: figs. 1-4, pl. 85: figs. 9-11. [Ayrshire, Scotland.] (Middle and upper Ashgill.)

N. minor Paul, 1967:531-533, 535, figs. 2, 4, pl. 85: figs. 5-8. [Ayrshire, Scotland.]

Order ECHINOCYSTITOIDA Jackson

Family ECHINOCYSTITIDAE Gregory

Genus Pronechinus Kier

UPPER PERMIAN

Pronechinus Kier, 1965:461–462. Type-species: P. anatoliensis Kier, 1965:462–463, figs. 23–24, pl. 58: fig. 4, pl. 59: fig. 3. [Turkey.]

Genus Eupholidocidaris Kier

In the *Treatise*, Kier (Durham et al., 1966:U302) considers *Eupholidocidaris* Kier a subjective synonym of *Proterocidaris* de Koninck.

Mississippian

Eupholidocidaris Kier, 1956:15. Type-species: E. brightoni Kier, 1956:16–17, figs. 1–2, pl. 1. [Ireland.]

PENNSYLVANIAN

E. belli Kier, 1957a:326-328, fig. 1. [Texas, U.S.A.]

Genus Fournierechinus Jackson

MISSISSIPPIAN

Fournierechinus Jackson, 1929:67. Type-species: F. deneensis Jackson, 1929:67–72, pl. 9, pl. 10: figs. 1–2. [Belgium.] (Lower Viséan.)

Genus Jacksonechinus Lambert

In the *Treatise*, Kier (Durham et al., 1955: U302) provisionally considers this genus a subjective synonym of *Proterocidaris* de Koninck.

PENNSYLVANIAN

Jacksonechinus Lambert, 1935e:39-40. Type-species: J. andrewi Lambert, 1935e:40, pl. 1: figs. 1-3. [Egypt.]

Genus Pholidocidaris Meek and Worthen

MISSISSIPPIAN

P. tornacensis Jackson, 1929:64-66, pl. 5: fig. 7, pl. 10: figs. 3-6. [Belgium.] (Tournaisian.)

Genus Rhenechinus Dehm

LOWER DEVONIAN

Rhenechinus Dehm, 1953:88-93. Type-species: R. hopstatteri Dehm, 1953:88-94, figs. 1-2, pl. 5. [Germany.]

Family LEPIDESTHIDAE Jackson

Genus Lepidesthes Meek and Worthen

PENNSYLVANIAN

L. grandis Kier, 1958a:20-23, figs. 21-22, pl. 8A. [Texas, U.S.A.]

L. alta Kier, 1958a:17-20, figs. 15-20, pl. 7. [Tennessee, U.S.A.] (Meramecian.)

L. formosa Termier and Termier, 1950:99, 102, pl. 231: fig. 21. [Morocco, North Africa.] (Upper Viséan.)

L. howsei Jackson, 1926:529, pl. 30. [England.]

L.? martini Spreng and Howe, 1963:937-938, figs. 6E-I. [Missouri, U.S.A.]

MISSISSIPPIAN to UPPER DEVONIAN

L. warrenensis Cooper, 1931b:532–538, figs. 1–2. [U.S.A.]

Genus Meekechinus Jackson

MISSISSIPPIAN

M.? herbornensis Bindemann, 1938: 203–220, figs. 1–2, pl. 1: figs. 1–12, pl. 2: figs. 1–5, pl. 3: figs. 1–4, pl. 4: figs. 1–2. [Germany.]

Family LEPIDOCENTRIDAE Lovén

Genus Lepidocentrus Müller

Mississippian

L. mammillatus Jackson, 1929:21–22, pl. 1: figs. 12a–d. [Belgium.] (Viséan.)

Upper Devonian

L.? thomasi Belanski, 1928:181–183, pl. 13: figs. 1–16. [Iowa, U.S.A.]

LOWER DEVONIAN

L. lenneanus Wolburg, 1933:47-49, fig. 3, pl. 3. [Germany.]

Genus Albertechinus Stearn

Upper Devonian

Albertechinus Stearn, 1956:741-744. Type-species: A. montanus Stearn, 1956:744-746, fig. 1, pl. 81: figs. 1-3. [Alberta, Canada.] (Fairholme Fm.)

Genus Aulechinus Bather and Spencer

UPPER ORDOVICIAN

Aulechinus Bather and Spencer, 1934:558. Typespecies: A. grayae Bather and Spencer, 1934:558. [Scotland.]

Genus Cavanechinus Brown

MIDDLE DEVONIAN

Cavanechinus Brown, 1967:158-159. Type-species: C. warreni Brown, 1967: 160, fig. 1, pl. 4: figs. 1-2. [South of Yass, New South Wales, Australia.]

Genus Deneechinus Jackson

MISSISSIPPIAN

Deneechinus Jackson, 1929:22. Type-species: D. tenuispinus Jackson, 1929:22-24, pl. 1: fig. 11. [Belgium.] (Lower Viséan.)

Genus Ectinechinus MacBride and Spencer

UPPER ORDOVICIAN

Ectinechinus MacBride and Spencer, 1938:95. Typespecies: E. lamonti MacBride and Spencer, 1938: 95, figs. 2a-b, 5e, 7d, 10b, 11b, pl. 12: figs. 4-6, pl. 13: figs. 3-4, pl. 14: figs. 4-5, pl. 15: fig. 5. [Scotland.] (Ashgillian.)

Genus Eothuria MacBride and Spencer

UPPER ORDOVICIAN

Eothuria MacBride and Spencer, 1938:95. Typespecies: E. beggi MacBride and Spencer, 1938:95, figs. 5f, 7e, 8c, 13–15, pl. 15: figs. 6–9, pl. 16: figs. 1–5, pl. 17: figs. 1–5. [Scotland.] (Ashgillian.) MacBride and Spencer (1938:95) created a new order Megalopoda and family Eothuridae for Eothuria. Durham (1966:377) erected a superorder Megalopodacea.

Genus Hyattechinus Jackson

Mississippian

H. dixoni Hawkins, 1935b:243-246, fig. 2, pl. 15: figs. 1-3. [Wales, Great Britain.]

H. elegans Jackson, 1929:24-30, fig. 5, pl. 4: figs. 2-3, 4a-g, pl. 5: figs. 5a-r. [Belgium.] (Tournaisian.)

H. laudoni Kier, 1965:463, 464, figs. 3F, 25, pl. 58: fig. 1, pl. 59: figs. 1-2. [Montana, U.S.A.]

H. toreumaticus Hawkins, 1935b:246-248, fig. 3, pl. 14: fig. 2. [Wales, Great Britain.]

Genus Lepidechinoides Olsson

DEVONIAN

L. hunti Cooper, 1931a:132-137, figs. 1B, 1C, 1F, 2A, pl. 18: figs. 1-7. [U.S.A.] (Skaneateles Fm.)

L. whitnalli Cooper, 1931a:137–139, figs. 1D–E, pl. 19: figs. 4–8. [U.S.A.]

Genus Lepidechinus Hall

MISSISSIPPIAN

- L. belgicus Jackson, 1929:46–47, pl. 5: figs. 1–2. [Belgium.] (Lower Viséan.)
- L. cooperi Kier, 1958a:15-17, figs. 11-12, pl. 6. [Iowa, U.S.A.] (Kinderhookian.)

Genus Perischodomus M'Coy

MISSISSIPPIAN

P. fraiponti Jackson, 1929:48-50, pl. 5: figs. 3-4. [Belgium.] (Lower Viséan.)

Genus Porechinus Dehm

LOWER DEVONIAN

Porechinus Dehm, 1961:4-5. Type-species: P. porosus Dehm, 1961:4-5, fig. 2, pl. 1: figs. 1-4. [West Germany.]

Family Uncertain

Genus Devonocidaris Thomas

UPPER DEVONIAN

- D. dumoni Maillieux, 1935:11-14, pl. 2: figs. 2-6. [Belgium.] (Frasnian.)
- D. hacquaerti Maillieux, 1935:9-11, pl. 2: figs. 1-ld. [Belgium.] (Frasnian.)
- D. jacksoni Thomas, 1924:500–505, pl. 50: fig. 36, pl. 51: figs. 1–26, pl. 52: figs. 1–4, pl. 53: figs. 1–7, pl. 54: figs. 1–6. [Iowa, U.S.A.]
- D. primaevus Belanski, 1928:184–186, pl. 13: figs. 29–34. [Iowa, U.S.A.]
- D. thomasi Stainbrook, 1937: 899–901, pl. 1: figs. 5–7, 9. [U.S.A.]

Order PALAECHINOIDA Haeckel

Family PALAECHINIDAE M'Coy

Genus Palaechinus M'Coy

MISSISSIPPIAN

- P. canadensis Kier, 1953:65-69, figs. 1-4. [Canada. Kier referred to genus as Palaeechinus Lovén (nom. van.).] (Upper Kinderhookian or lower Osagean.)
- P. globulus Jackson, 1929:30-33, pl. 2: figs. 10-14. [Belgium. Jackson referred to genus as Palaeechinus Lovén (nom. van.)] (Tournaisian.)
- P. merriami Kier, 1965:458-459, fig. 17, pl. 57: fig. 2. [Nevada, U.S.A.]
- P. sprengi Kier, 1954:252-254, figs. 1-2. [Canada. Kier referred to genus as Palaeechinus Lovén (nom. van.).]
- P. tetrastichus Kier, 1958a:12-14, figs. 6-10, pl. 5B. [U.S.A.]
- P. visetensis Jackson, 1929:33-36, fig. 7, pl. 2: figs. 1-9. [Belgium. Jackson referred to genus as Palaeechinus Lovén (nom. van.).] (Viséan.)

Genus Lovenechinus Jackson

MISSISSIPPIAN

- L. gordoni Kier, 1965:459-460, figs. 18-20, pl. 58: fig. 2. [Nevada, U.S.A.] (Lower Mississippian.)
- L. hunanensis Ozaki, 1939:565-567, pl. 30: figs. 1-7. [Central China.] (Shihtengtse Ls.)
- L. jacksoni Demanet, 1931:1-9, figs. 1-7. [Belgium.] (Lower Dinantian.)

Genus Melonechinus Meek and Worthen

MISSISSIPPIAN

- M. chuseni Chao, 1942:202-204, fig. 1. [China.] (Upper part of Yentse Series.)
- M.? heckeri Faas, 1941:74-75, fig. 9, pl. 10: fig. 9. [Leningrad Province, U.S.S.R.]

Genus Donbassechinus Faas

In the *Treatise* Kier (Durham et al., 1966:U309) provisionally considers this genus a subjective synonym of *Melonechinus* Meek and Worthen.

MISSISSIPPIAN

Donbassechinus Faas, 1941:73. Type-species: D. kumpani Faas, 1941:73-74, figs. 6-8, pl. 10: figs. 6-8. [Don Basin, U.S.S.R.]

Family CRAVENECHINIDAE Hawkins

Genus Cravenechinus Hawkins

MISSISSIPPIAN

Cravenechinus Hawkins, 1946:195. Type-species: C. uniserialis Hawkins, 1946:195-197, fig. 1. pl. 13. [England.] (Viséan.)

Genus Gotlandechinus Regnéll

UPPER SILURIAN

Gotlandechinus Regnéll, 1956:158-160. Type-species: G. balticus Regnéll, 1956:160-163, figs. 1-2, pl. 1: fig. 4. [Sweden.] (Lower Ludlow.)

Genus Xenechinus Kier

LOWER PERMIAN

Xenechinus Kier, 1958b:889-890. Type-species: X. parvus Kier, 1958b:890-892, figs. 1-3, pl. 114: figs. 8-12. [Texas, U.S.A.] (Wolfcampanian.)

Order CIDAROIDA Claus

Family ARCHAEOCIDARIDAE M'Coy

Genus Archaeocidaris M'Coy

PERMIAN

- A. barroisi Mathieu, 1949:39-42, pl. 1: figs. 2-12,15. [Tunis, North Africa.]
- A. cowleyi Boos, 1929:249-250, pl. 27: figs. 3-3c. [Oklahoma-Kansas, U.S.A.] (Lower Permian.)
- A. manhattanensis Mathieu, 1949:41, pl. 1: fig. 1. [Texas, U.S.A.]

PENNSYLVANIAN

A. immanis Kier, 1958a:3-7, figs. 1-2, pl. 1, pl. 2, pl. 3A. [Oklahoma, U.S.A.]

- A. meurevillensis Dehée, 1927:290-293, pl. 7. [France.] (Westphalian.)
- A. mosquensis A. Ivanov (in litt.), Yakovlev, 1939: 70, pl. 13: figs. 23-26. [U.S.S.R.]
- A. subwortheni Faas (in litt.), Yakovlev, 1939:69-70, pl. 13: figs. 10-12. [U.S.S.R.]

MISSISSIPPIAN

- A. aliquantula Kier, 1958a:7-8, pl. 3C. [Iowa, U.S.A.] (Kinderhookian.)
- A. propinqua Jackson, 1929:17-18, fig. 3, pl. 1: figs 5a-b. [Belgium.] (Tournaisian.)
- A. setosa Jackson, 1929:11-12, pl. 1: 11-12, pl. 1: figs. 6a-b. [Belgium.]

UPPER DEVONIAN

A. fraxinensis Maillieux, 1940:28-30, pl. 2: figs. 18-21a. [Belgium.] (Frasnian.)

Genus Echinocrinus L. Agassiz

According to Fell (Durham et al., 1966:U317) in the *Treatise*, this genus is considered an objective synonym of *Archaeocidaris* (suppressed 1CZN Op. 370, 1955).

PENNSYLVANIAN

E.? jacksoni Spreng and Howe, 1963:936-937, figs. 6C-D. [Missouri, U.S.A.] (Missourian.)
E.? remotus Spreng and Howe, 1963:936, figs. 6A-B. [Missouri, U.S.A.] (Virgilian.)

Genus Permocidaris Lambert

In the *Treatise* Fell (Durham et al., 1966:U317) provisionally considers *Permocidaris* a subjective synonym of *Archaeocidaris*.

PERMIAN

P.? timorensis Wanner, 1941:298-302, fig. 1, pl. 25: figs. 11-19. [Timor (Island), South Malay Archipelago.]

Genus Lepidocidaris Meek and Worthen

MISSISSIPPIAN

L. squamosa (Meek and Worthen) var. anglica Hawkins, 1935b:240-242, fig. 1, pl. 14: fig. 1. [England.] (Tournaisian.)

Genus Polytaxicidaris Kier

MISSISSIPPIAN

Polytaxicidaris Kier, 1958a:10-11. Type-species: P. dyeri Kier, 1958a:11-12, fig. 5, pl. 4B, pl. 5A. [Indiana, U.S.A.] (Osagean.)

P. lirata Kier, 1965:456–457, fig. 13, pl. 56, pl. 57: fig. 1, pl. 58: fig. 3. [Oklahoma, U.S.A.]

Genus Silurocidaris Regnéll

UPPER SILURIAN

Silurocidaris Regnéll, 1956:165–166. Type-species: S. clavata Regnéll, 1956:166–167, pl. 1: figs. 1–3, pl. 2: figs. 1–2, pl. 4: figs. 3–5. [Sweden.] (Lower Ludlow.)

Genus Xenocidaris Schultze

UPPER DEVONIAN

X. caheni Maillieux, 1935:6–8, pl. 1: fig. 1–1d. [Belgium.] (Frasnian.)

X. mariaeburgensis Maillieux, 1940:33-36, pl. 2: figs. 2-17. [Belgium.] (Frasnian.)

X. mariaeburgensis Maillieux praemut. major Maillieux, 1940:37–38, pl. 2: figs. 22–22b, pl. 3: figs. 1–21. [Belgium.] (Frasnian.)

Family MIOCIDARIDAE Durham and Melville

Miocidaridae Durham and Melville, 1957:252.

Genus Miocidaris Döderlein

LOWER JURASSIC

M. dubari Lambert, 1931b:11-13, pl. 1: figs. 1-6. [North Africa.] (Lower Domerian.)

M. tenuispina Mortensen, 1934a:394-398, figs. 1-3, pl. 21: fig. 2. [England.] (Liassic.)

M. turneri Lörcher, 1930:261–262, pl. 19: figs. 4a-c. [Germany.]

TRIASSIC

M. barzaviae Jekelius, 1932:43-44, pl. 2: figs. 24-26. [Rumania.]

M. curmaturi Jekelius, 1932:43, pl. 2: figs. 21-22. [Rumania.]

M. timorensis Bather, 1929:227-232, pl. 257: figs. 18-20. [Timor (Island), Indonesia.]

LOWER TRIASSIC

M. pakistanensis Linck, 1955:490-493, figs. 1-4. [Pakistan.]

PERMIAN

M. connorsi Kier, 1965:453-456, pl. 55: figs. 1-3. [Texas, U.S.A.] (Bell Canyon Fm., Upper Permian.)

M. permica Wanner, 1941:302-310, figs. 2-3, pl. 25: figs. 1-10, 20-27, pl. 26: figs. 1-6, 23. [Timor (Island), South Malay Archipelago.]

M. platyacantha Nisiyama, 1966:155-156, pl. 1: fig. 3. [Japan.] (Basleonian.)

M. spinulifera Nisiyama, 1966:155, pl. 1: figs. 1-2. [Japan.] (Basleonian.)

Genus Anaulocidaris Zittel

UPPER JURASSIC

A. tuberculata Mortensen, 1937:18–19, pl. 2: figs. 11–16. [Germany.]

TRIASSIC

A. vinassai Boni, 1939:328-332, pl. 17: figs. 6-10, 17. [Italy.]

Genus Dicyclocidaris Fell

UPPER TRIASSIC

Dicyclocidaris Fell, 1950:83. Type-species: D. den-

ticulata Fell, 1950:83-85, figs. 1-3. [New Zealand.] (Karnian.)

Genus Lenticidaris Kier

LOWER TRIASSIC

Lenticidaris Kier, 1968a:1000-1001. Type-species: L. utahensis Kier, 1968a:1001-1004, fig. 1, pl. 121: figs. 1-2, pl. 122: figs. 1-3, pl. 123: figs. 3-9. [Utah, U.S.A.]

Genus Pachycidaris Thiéry

JURASSIC

Pachycidaris Thiéry, 1928:180. Type-species: P. thieryi Collignon and Lambert. [Europe.] (Oxfordian.)

Lower Jurassic

- P. bergouniouxi Mercier, 1937c:18, pl. 1: figs. 5-7. [France.] (Domerian.)
- P. jeanneti Mercier, 1937c:17, pl. 1: figs. 1-2. [France.] (Toarcian.)
- P. piveteaui Mercier, 1937c:18-19, pl. 1: fig. 8. [France.] (Toarcian.)

Genus Triadocidaris Döderlein

TRIASSIC

T. coronensis Jekelius, 1932:44, pl. 2: figs. 20a-c. [Rumania.]

UPPER TRIASSIC

T. lungauensis Tollmann in Kristan-Tollmann, Tollmann and Geyssant, 1969:21–23, pl. 3: figs. 3–6, pl. 6: figs. 5–8. [Tarntal Mountains, Austria.] (Rhaetic.)

Family CIDARIDAE Gray

Genus Minicidaris Deraniyagala

MIOCENE

Minicidaris Deraniyagala, 1961:153. Type-species:

M. minihagali Deraniyagala, 1961:154, pl. 5: figs. 3-4. [Ceylon.]

Subfamily HISTOCIDARINAE Mortensen

Genus Histocidaris Mortensen

RECENT

- H. acutispina Mortensen, 1927b:248-250, figs. 4-5, pl. 50: figs. 1-2, pl. 52: fig. 2, pl. 77: fig. 4. [Malaysia.]
- H. australiae Mortensen, 1928:66. [Off coast of New South Wales, Australia.]
- H. carinata Mortensen, 1928:66. [Off Kyushu Island, South Japan.]
- H. crassispina Mortensen, 1928:66. [Off New South Wales, Australia.]
- H. denticulata Koehler, 1927:10–14, pl. 1: figs. 1–3,6, 7, pl. 2: fig. 1, pl. 23: fig. 1. [Bay of Bengal,Indian Ocean.]
- H. formosa Mortensen, 1928:65-66. [Kei Islands, Indonesia Malay Archipelago.]
- H. magnifica Mortensen, 1927b:245-248, figs. 1-3, pls. 48-49, pl. 76. [Malaysia.]
- H. nuttingi Mortensen, 1926:6-7, pl. 1: figs. 1-2,4, pl. 2: fig. 6, pl. 3: fig. 9, pl. 4: figs. 11-12. [Off Havana, Cuba.]
- H. recurvata Mortensen, 1928:66. [Kei Islands, Indonesia Malay Archipelago.]

MIDDLE MIOCENE

- H. geneffensis Lambert, 1931d:204, pl. 5: fig. 50. [Egypt.] (Helvetian.)
- H. oranensis Lambert, 1931c:83-84, pl. 3: figs. 24-25. [Algiers, North Africa.] (Upper Sahelian = Upper Tortonian.)

OLIGOCENE

H. mckayi Fell, 1954:30-32, fig. 15, pls. 7A-J, pl. 9D, pl. 12G, pl. 13C, pl. 14E. [New Zealand.] (Duntroonian to Waitakian.)

Subfamily CTENOCIDARINAE Mortensen

Genus Ctenocidaris Mortensen

RECENT

C. polyplax Mortensen, 1950a:296–297, pl. 8: figs.1, 2, 8, pl. 9: fig. 4. [Antarctic Ocean.]

Genus Austrocidaris H. L. Clark

RECENT

- A. gigantea H. L. Clark, 1925a:28, pl. 3: figs. 1-2. [Antarctic, South Victoria Land, off Coulman Island.]
- A. platyacantha H. L. Clark, 1925a:29-30, pl. 2: fig. 1. [Antarctic seas (south of Coulman and Balleny Islands).]

MIOCENE

A. operta Philip, 1964:463–464, figs. 5d–e, pl. 61: figs. 5–6, pl. 64: figs. 1–4, 8. [Southeastern Australia.]

Genus Eurocidaris Mortensen

RECENT

- E. nutrix Thomson var. longispina Mortensen, 1928:67. [Heard Island, Southern Ocean.]
- E. rugosa Koehler, 1926:17–23, pl. 99: figs. 4–9, pl. 100: figs. 1–6, pl. 101: figs. 1–7, pl. 102: figs. 1–7, pl. 119: fig. 2. [Antarctic.]

Genus Homalocidaris Mortensen

RECENT

Homalocidaris Mortensen, 1928:67. Type-species: Austrocidaris gigantea H. L. Clark. [Antarctic.]

Genus Notocidaris Mortensen

RECENT

- N. platyacantha H. L. Clark var. contracta Koehler, 1926:13-14, pl. 94: fig. 5, pl. 96: figs. 1-6, pl. 99: fig. 5. [Antarctic.]
- N. remigera Mortensen, 1950a:298–299, pl. 5: figs. 1–2, pl. 8, figs. 3–4. [Antarctic Ocean.]
- N. spinosa Koehler, 1926:14–17, pl. 97: figs. 1–6,
 pl. 98: figs. 1–7, pl. 99: figs. 1–3, pl. 112: fig. 7,
 pl. 114: fig. 7, pl. 119: fig. 6. [Antarctic.]

MIDDLE PLIOCENE

N. vellai Fell, 1954:43–45, pl. 15A–M. [New Zealand.] (Lower-upper Nukumaruan.)

Subfamily GONIOCIDARINAE Mortensen

Genus Goniocidaris Desor in Agassiz and Desor

RECENT

- G. alba Mortensen, 1928:67. [Off Kyushu Island, South Japan.]
- G. australiae Mortensen, 1928:68. [Off the coast of New South Wales, Australia.]
- G. balinensis Mortensen, 1932b:148–151, figs. 1–4, pl. 1: figs. 1–5, pl. 11: fig. 7, pl. 13: figs. 11–14. [Bali Sea, East Indies.]
- G. corona Baker, 1968:200-203, fig. 1, pl. 1. [Northeastern New Zealand.]
- G. crassa Mortensen, 1928:68. [Mindanao Island, south of Philippine Islands.]
- G. impressa Koehler, 1926:24-28, pl. 91: figs. 1-8, pl. 92: figs. 1-5, 8-14, pl. 119: fig. 1. [Antarctic.]
- G. indica Mortensen, 1939b:3-6, figs. 1-2, pl. 1: figs. 1-4, pl. 5: figs. 4, 7, pl. 6: figs. 17-18, [In Indian Ocean between Pemba Island and East Africa.]
- G. magi Pawson, 1964:67-70, figs. 1-4, pl. 1. [New Zealand.]
- G. sibogae Mortensen, 1928:68. [Molucca Sea, Malay Archipelago.]
- G. spinosa Mortensen, 1928:67. [Amboina, Indonesia.]

PLIOCENE

- G. mortenseni Chapman and Cudmore, 1934:139-140, pl. 14: figs. 23, 27. [South Australia.]
- G. tubaria (Lamarck) hallettensis Philip, 1964:458-460, figs. 4g, 4j, 4l, pl. 66: figs. 1, 2, 12, pl. 67: figs. 4-6. [Southeastern Australia.]

MIOCENE

G. praecipua Philip, 1964:455-456, figs. 4i, 4k, 4m, pl. 61: figs. 10-12. [Southeastern Australia.]

OLIGOCENE

- G. hebe Fell, 1954:37-39, pls. 4A-J, 7D, 8D. [New Zealand.] (Duntroonian to Hutchinsonian.)
- G. holguinensis Sánchez Roig, 1949:31. [Cuba.]
- G. murrayensis Chapman and Cudmore, 1934:138-139, pl. 14: figs. 20-22. [South Australia.]

G. pusilla Fell, 1954:39-40, pls. 5H, 13D, 14C. [New Zealand.] (Otaian.)

EOCENE

G. habanensis Sánchez Roig, 1949:30-31, pl. 1: fig.5. [Cuba.]

Genus Adelcidaris Cotton and Godfrey

In the *Treatise* Fell (Durham et al., 1966:U325) states that *Adelcidaris* is a nomen vanum for *Goniocidaris*.

RECENT

Adelcidaris Cotton and Godfrey, 1942:217. Typespecies: Goniocidaris tubaria (Lamarck.)

Subgenus Goniocidaris (Aspidocidaris) Mortensen

RECENT

Goniocidaris (Aspidocidaris) Mortensen, 1928:67. Type-species: cited as Goniocidaris clypeata Döderlein. According to Fell (Durham et al., 1966:U325) the type is Goniocidaris alba Mortensen. [Japan, Indonesia, Australia, New Zealand.]

Subgenus Goniocidaris (Cyrtocidaris) Mortensen

RECENT

- Goniocidaris (Cyrtocidaris) Mortensen, 1927b:264. Type-species: G. tenuispina Mortensen, 1927b: 264–269, figs. 10–11, pl. 57: figs. 1–2, pl. 58: fig. 1, pl. 59: fig. 2, pl. 61: figs. 6–8, pl. 63: fig. 5, pl. 73: figs. 5–6, pl. 79: figs. 1–3. [Philippines.]
- G. (C.) tenuispina Mortensen var. major Mortensen, 1927b:270-272, fig. 13, pl. 58: fig. 2, pl. 79: fig. 9. [Philippines.]
- G. (C.) tenuispina Mortensen var. tuberculata Mortensen, 1927b:269-270, fig. 12, pl. 57: fig. 3, pl. 59: fig. 1, pl. 61: figs. 9-11, pl. 73: figs. 7-8, pl. 79: figs. 4-8. [Philippines.]

Subgenus Goniocidaris (Discocidaris) Mortensen

RECENT

Goniocidaris (Discocidaris) peltata Mortensen, 1927b:261-264, fig. 9, pls. 55-56, pl. 74: figs. 4-5, pl. 78: figs. 9-12. [Malaysia.]

Genus Delocidaris Philip

MIOCENE

Delocidaris Philip, 1964:464-466. Type-species: Goniocidaris prunispinosa Chapman and Cudmore.

Genus Psilocidaris Mortensen

RECENT

Psilocidaris Mortensen, 1927b:282-283. Type-species: P. echinulata Mortensen, 1927b:283-285, fig. 18, pl. 60: figs. 1-2, pl. 61: figs. 4-5, pl. 63: fig. 4, pl. 73: figs. 3-4, pl. 78: figs. 3-5. [Malaysia.]

Genus Rhopalocidaris Mortensen

RECENT

- Rhopalocidaris Mortensen, 1927b:272-273. [Philippines.] Type-species: Cidaris (Discocidaris) hirsutispinus de Meijere. [Malay Archipelago.]
- R. hirsutispinus (de Meijere) var. viridis Mortensen, 1927b:273-275, fig. 14, pl. 61: fig. 2, pl. 73: figs. 1-2, pl. 78: figs. 6-8. [Philippines.]
- R. rosea Mortensen, 1928:68. [Japanese seas (Sagami Sea; off Goto Island).]
- R. rosea Mortensen tenuis Mortensen, 1928:68-69. [Off Kei Islands, Indonesia.]

Genus Schizocidaris Mortensen

RECENT

S. fasciata Mortensen, 1927b:280-282, fig. 17, pl. 61: fig. 3, pl. 74: fig. 3, pl. 78: fig. 2. [Philippines.]

Subfamily STEREOCIDARINAE Lambert

Genus Stereocidaris Pomel

RECENT

- S. excavata Mortensen, 1932b:151-154, fig. 5, pl.
 2: figs. 1-2, pl. 3: figs. 1-5, pl. 4: fig. 2, pl. 11: figs. 1-2. [South Africa.]
- S. grandis (Döderlein) var. hyatorina Mortensen, 1928:69. [Off Kyushu, South Japan.]
- S. grandis (Döderlein) var. rubra Mortensen, 1927b: 301, pl. 68: figs. 1–2. [Malaysia.]
- S. granularis Mortensen, 1928:69. [Philippines, Molucca Sea.]
- S. hawaiiensis Mortensen, 1928:69. [Hawaiian seas.]
- S. indica Döderlein var. philippinensis Mortensen, 1928:71. [Philippine seas.]
- S. nascaensis Allison, Durham and Mintz, 1967: 10–13, figs. 1–4, 15–20. [West from Chile.]
- S. purpurascens Mortensen, 1928:70. [Off Kei Islands, Indonesia.]
- S. reducta Mortensen, 1939b:7-9, fig. 3, pl. 2: figs. 1-4, pl. 5: fig. 1, pl. 6: figs. 14-16. [Maldive Islands, Indian Ocean.]
- S. sceptriferoides Döderlein var. lamellata Mortensen, 1927b:304–306, fig. 22, pls. 71–72, pl. 74: figs. 8–9, pl. 78: figs. 13–14. [Malaysia.]
- S. sceptriferoides Döderlein var. lanceolata Mortensen, 1928:71. [Sagami Sea, Japan.]
- S. squamosa Mortensen, 1928:70. [Saya de Malha Bank, Indian Ocean.]
- S. stylifera Mortensen, 1928:69. [Philippines.]
- S. sulcatispinis Mortensen, 1928:70. [Off Celebes, Kei Islands, Indonesia.]
- S. tubifera Mortensen, 1928:70. [Kei Islands, Philippines.]
- S. tubifera Mortensen var. impressa Mortensen, 1928:70. [Kei Islands, Philippines.]

MIDDLE PLIOCENE

S. hutchinsoni Fell, 1954:35-36, pls. 6A-D, 6F-H, 6J-L, 9E. [New Zealand.] (Nukumaruan.)

LOWER PLIOCENE

S. grandis (Döderlein) fusana Nisiyama, 1966:159–160, pl. 1: fig. 4. [Japan.] (Kurotaki Fm.)

UPPER EOCENE

- S. cudmorei Philip, 1964:440–441, figs. 1a–d, li–j, pl. 60. [Southeastern Australia.]
- S. fosteri Philip, 1964:441–442, figs. 1f–g, pl. 59: fig. 6, pl. 65: fig. 3. [Southeastern Australia.]
- S.? hispida Philip, 1964:444–446, fig. 1h, pl. 61: figs. 8–9. [Southeastern Australia.]
- S. inermis Philip, 1964:442–444, figs. 2b, 2c, 2e, 2f, pl. 59: figs. 1–3, 7, 8. [Southeastern Australia.]
- S.? intricata Philip, 1964:446–447, fig. 1e, pl. 59: fig. 4. [Southeastern Australia.]

MIDDLE EOCENE

S. destefanii Innocenti, 1924:41–43, pl. 2: figs. 1–6. [Istria, former Italian province ceded to Yugoslavia in 1947.]

CRETACEOUS

- S. baileyi Fell, 1962:27–29, pl. 1: figs. 1–3. [California, U.S.A.]
- S. bolli Krenkel, 1928:13-14, pl. 1: figs. 4-12. [Germany. Nomen nudum for Cidaris spinosa Boll, 1846.]
- S. jaekeli Krenkel, 1928:15–16, pl. 1: figs. 18–24. [Germany.]
- S. jaekeli Krenkel var. latior Krenkel, 1928:17, pl. 1: figs. 21-22. [Germany.]
- S. jaekeli Krenkel var. undulifera Krenkel, 1928: 16–17, pl. 1: figs. 23–24. [Germany.]
- S. rugensis Krenkel, 1928:15, pl. 1: figs. 15-17. [Germany. Nomen nudum for Cidaris alatus Boll, 1846.]

UPPER CRETACEOUS

S. jaekeli Krenkel var. grandior Krenkel, 1928:16, pl. 1: figs. 18-20. [Germany.] (Upper Senonian.)

LOWER CRETACEOUS

S. hudspethensis Cooke, 1955:89, pl. 18: figs. 1-4. [Texas, U.S.A.] (Lower Cenomanian to upper Albian.)

Genus Phalacrocidaris Lambert

PLEISTOCENE/PLIOCENE

S. (Phalacrocidaris) japonica (Döderlein) multipora Nisiyama, 1966:161–162, pl. 1: figs. 5–6. [Japan.] (Koshiba Fm.)

Genus Typocidaris Pomel

In the *Treatise* Fell (Durham et al., 1966:U325) considers *Typocidaris* a subjective synonym of *Stereocidaris*.

PALEOCENE

- T. danica Ravn, 1928:23–25, fig. 7, pl. 2: figs. 9–12. [Denmark.] (Danian.)
- T. rosenkrantzi Ravn, 1928:21-23, fig. 6, pl. 1: figs. 9-15, pl. 2: fig. 13. [Denmark.] (Danian.)

UPPER CRETACEOUS

- T. baumbergeri Jeannet, 1934d:1-3, fig. 1, pl. i: figs. 1-2. [Austria.] (Urgonian.)
- T. falgarsensis Lambert, 1933d:184-185, pl. 1: figs. 2-5. [Spain.] (Maestrichtian.)

Lower Cretaceous

T. thalebensis Lambert, 1931c:68, fig. 4. [Algiers, North Africa.] (Albian.)

Genus Chorocidaris Ikeda

RECENT

Chorocidaris Ikeda, 1941:85-86. Type-species: C. micca Ikeda, 1941:85-86, pl. 6: figs. 1-8. [Japan.]

Genus Compsocidaris Ikeda

RECENT

Compsocidaris Ikeda, 1939a:160-161. Type-species: C. pyrsacantha Ikeda, 1939a:160-164, pls. 7-10. [Bonin Islands (Japan), Western Pacific Ocean.]

Subfamily RHABDOCIDARINAE Lambert

Genus Rhabdocidaris Desor

Lower Cretaceous

- R. arginensis Weber, 1934:22-23, 80, pl. 3: figs. 7a-g. [Crimea, U.S.S.R.] (Hauterivian.)
- R. brasiliensis Maury, 1936:262-263, pl. 2: figs. 4-5. [Brazil.] (Middle Albian.)
- R. buraganensis Weber, 1934:23, 80, pl. 3: figs. 8a-e. [Crimea, U.S.S.R.] (Hauterivian.)

UPPER JURASSIC

- R. boehmi Bantz, 1969:7, pl. 3: fig. 1. [Bavaria.] (Lower Tithonian, Malm Zeta_{1/2}, facies of Solnhofen.)
- R. cotteaui Jeannet, 1929:37–39, fig. 17, pl. 4: figs. 7–9, pl. 5: figs. 31–33, 41–43. [Switzerland.] (Lower Kimmeridgian.)
- R. desori Jeannet, 1929:26-28, figs, 1, 4, 13-14, pl.3: figs. 7-10, pl. 5: fig. 44. [Switzerland.] (Lower Kimmeridgian.)
- R. mayri Bantz, 1969:7-8, pl. 7: fig. 1. [Bavaria.] (Lower Tithonian, Malm Zeta₂.)
- R. nunlisti Jeannet, 1929:13–14, pl. 2: figs. 2–3, pl. 5: figs. 10–12. [Switzerland.] (Lower Kimmeridgian.)
- R. orbignyiformis Jeannet, 1929:35-37, pl. 4: figs. 5-6, pl. 5: figs. 28-30, 37-39. [Switzerland.] (Upper Kimmeridgian.)
- R. rauraca Jeannet, 1929:39–40, pl. 4: figs. 10–12, pl. 5: figs. 16–18. [Switzerland.] (Upper Rauracian.)
- R. stingelini Jeannet, 1929:41, pl. 2: fig. 11, pl. 5: figs. 34-36. [Switzerland.] (Upper Kimmeridgian.)
- R. yailensis Weber, 1934:21-22, 79-80, pl. 3: fig. 6. [Crimea, U.S.S.R.) (Sequanian.)

MIDDLE JURASSIC

- R. bigoti Mercier, 1931:94-97, figs. 1-4. [France.] (Upper Bathonian.)
- R. kisombyensis Lambert, 1936c:12, pl. 1:figs. 5-7. [Madagascar, off East Africa.] (Bathonian.)
- R. turbeti Lambert, 1933b:33, pl. 3: fig. 8. [North Africa.] (Bajocian.)

LOWER JURASSIC

R. chouberti Lambert, 1937:42, pl. 4: figs. 12-13. [Morocco.] (Upper Domerian.)

Genus Actinocidaris Mortensen

RECENT

Actinocidaris Mortensen, 1928:73. [Hawaii.] Typespecies: Phyllacanthus thomasi A. Agassiz and H. L. Clark.

Genus Chondrocidaris A. Agassiz

RECENT

C. brevispina H. L. Clark, 1925a:11, pl. 1: figs. 1-2. [Loyalty Islands, Southwestern Pacific Ocean.]

MIOCENE

C. problepteryx H. L. Clark, 1945:314–315, pl. 41: fig. E. [Fiji, South Pacific Ocean.]

LOWER MIOCENE

C. marianica Nisiyama, 1966:171-172, pl. 1: figs. 19-20. [Mariana Island, West Pacific Ocean.]

MIOCENE/UPPER OLIGOCENE

C. clarkii Chapman and Cudmore, 1934:141–142,pl. 13: figs. 15–17, pl. 15: fig. 31. [South Australia.]

Genus Megacidaris Thiéry

LOWER JURASSIC

M. cottreaui Mercier, 1937c:19-20. [France.] (Toarcian.]

Genus Parhabdocidaris Thiéry

UPPER JURASSIC

Parhabdocidaris Thiéry, 1928:181. [Europe.] Typespecies: Rhabdocidaris varusensis Cotteau.

Genus Phyllacanthus Brandt

RECENT

- P. forcipulatus Mortensen, 1936b:307-309, 1 fig., pl. 10: figs. 1-4, pl. 11: figs. 1-4, pl. 12: figs. 1-10. [Indian Ocean.]
- P. irregularis Mortensen, 1928:74. [West and south Australia.]
- P. irregularis Mortensen kimberi Cotton and Godfrey, 1942:216–217, pl. 12: figs. 1–2. [South Australia.]

PLEISTOCENE

P. tylotus H. L. Clark, 1945:313-314, pl. 41: fig. D. [Fiji, South Pacific Ocean.]

MIDDLE PLIOCENE

P. serratus Philip, 1963d:219, fig. 2e, pl. 25: figs. 1, 2, 4. [Southeastern Australia.]

MIOCENE

- P. clarkii (Chapman and Cudmore) impensus Philip, 1963d:217-218, fig. 5c, pl. 25: figs. 9-10, pl. 26: figs. 2, 5, 9. [Southeastern Australia.]
- P. dubius Brandt var. sundaica Martin in Jeannet and Martin, 1937:223-224. [Java, Indonesia.]
- P. wellmanae Fell, 1954:51-53, pls. 1C, 1D, 2. [New Zealand.] (Kapitean.)

LOWER PLIOCENE/UPPER OLIGOCENE

P. duncani Chapman and Cudmore, 1934:131-133, pl. 12: figs. 7-9, pl. 15: fig. 33. [South Australia.]

MIDDLE MIOCENE/LOWER OLIGOCENE

- P. duncani Chapman and Cudmore gambierensis Philip, 1963d:213-214, fig. 4, pl. 23: figs. 2, 10, pl. 24: figs. 1-3. [Southeastern Australia.] (Janjukian.)
- P. titan Fell, 1954:49-51, pls. 1B, 3, 10A, 11D. [New Zealand.] (Duntroonian-Waiauan.)

LOWER CRETACEOUS

- P. texanus Whitney and Kellum, 1966:245-248, pl.2: figs. 13-14. [Texas, U.S.A.] (Trinity Group. Aptian.)
- P. tysoni Whitney and Kellum, 1966:244-245, pl.
 2: figs. 4-6. [Texas, U.S.A.] (Trinity Group. Aptian.)

Genus Leiocidaris Desor

In the Treatise Fell (Durham et al., 1966:U330) considers Leiocidaris a subjective synonym of Phyllacanthus.

UPPER OLIGOCENE

- L. cojimarensis Lambert and Roig in Sánchez Roig, 1949:31. [Cuba. Although Lambert and Roig considered this species Miocene, Brodermann (1949:324) says it is Upper Oligocene.]
- L. spinidentatus Palmer in Sánchez Roig, 1949:32, pl. 1: fig. 3. [Cuba. Brodermann (1949:324) says it is Upper Oligocene.]

MIDDLE EOCENE

L. mortenseni Lambert, 1933a:30, pl. 1: figs. 18-21. [Madagascar, off East Africa.] (Lutetian.)

LOWER EOCENE

L. cottreaui Lambert in Lambert and Pérébaskine, 1929:474, pl. 38: figs. 6, 7. [North Africa.]

CRETACEOUS

L. leoni Lambert and Roig in Sánchez Roig, 1926: 33-34, pl. 4: figs. 5, 6. [Cuba.]

UPPER CRETACEOUS

- L. madrugensis Sánchez Roig, 1949:29-30, 32, pl. 1: figs. 2, 4. [Cuba.] (Maestrichtian.)
- L. sanfilippoi Checchia-Rispoli, 1932a:2-5, figs. 1-2, pl. 1: figs. 1-6. [North Africa.] (Maestrichtian.)
- L. stefaninii Shalem, 1933:19-22, pl. 2: figs. la-d. [Palestine.] (Cenomanian.)

L. tripolitana Checchia-Rispoli, 1933b:3-6, fig. 1, pl. 1: figs. 1-4, pl. 2: figs. 1-3. [North Africa.] (Maestrichtian.)

Lower Cretaceous

- L. karakachi Weber, 1934:42-43, 83, pl. 7: figs. 2a-c. [Crimea, U.S.S.R.] (Barremian.)
- L. thiebaudi Jeannet, 1955:555-557, pl. 26: figs. 1-7. [Angola, southwest Africa.] (Albian.)

UPPER JURASSIC

- L. rollieri Jeannet, 1933d:4-6, pl. 1: figs. 4, 8, 10. [Switzerland. First figured in Jeannet (1931).] (Lower Sequanian.)
- L. tobleri Jeannet, 1933d:2-4, pl. 1: figs. 1-3, 6, 7, 11. [Switzerland. First figured in Jeannet (1931).] (Lower Kimmeridgian.)

Genus Porocidaris Desor

RECENT

P. sibogae Mortensen, 1934a:166. [Malaysia, off Kei Islands.]

UPPER EOCENE

P. lopezi Sánchez Roig, 1953c:137, pl. 1: fig. 4. [Cuba.]

PALEOCENE

P. farafrensis Hassan, 1969:15-16, pl. 1: figs. 1-5. [Farafra Oasis, Upper Egypt.] (Landanian.)

Genus Prionocidaris A. Agassiz

RECENT

- P. baculosa (Lamarck) var. lineata H. L. Clark, 1925a:14. [Indian Ocean, Seychelles and Natal islands.]
- P. badia H. L. Clark, 1925a:14-15, pl. 2: fig. 2. [Mauritius Island, Indian Ocean.]
- P. bispinosa (Lamarck) var. laevis H. L. Clark, 1938:371-372, pl. 26: fig. 1. [Western Australia.]

P. bispinosa (Lamarck) var. nigrobrunnea Mortensen, 1928:74. [Shark's Bay, Western Australia.]

PLEISTOCENE-PLIOCENE/LOWER MIOCENE

P. malindiensis Stephenson, 1968:560-562, figs. 1f, 1h-i, 2f-i. [Kenya, East Africa.] (Baratumu and Midadoni Beds.)

LOWER MIOCENE

P. praeverticillata Stephenson, 1968:555-560, figs. la-c, 2a-e. [Kenya, East Africa.] (Baratumu Beds. Aquitanian-Burdigalian.)

MIOCENE/UPPER OLIGOCENE

P. scoparia Chapman and Cudmore, 1934:134–135,pl. 12: figs. 10–11, pl. 15: figs. 28–30. [South Australia.]

OLIGOCENE

P. haasti Fell, 1954:54-55, pls. 10C, 11F-H. [New Zealand.] (Duntroonian-Otaian.)

MIDDLE EOCENE

P. marchalli Fell, 1954:54, pls. 8B, 8C, 8I, 9C. [New Zealand.] (Bortonian.)

Subfamily CIDARINAE Gray

Genus Cidaris Leske

RECENT

- C. cidaris (Linnaeus) var. meridionalis Mortensen, 1928:71. [Bay of Biscay-Canaries-Madeira, North Atlantic.]
- C. mabahissae Mortensen, 1939b:9-11, fig. 4, pl. 1: figs. 5-6, pl. 4: fig. 4, pl. 5: fig. 5, pl. 6: figs. 3, 5, 8, 12, 13. [Maldive Islands, Indian Ocean off southern India.]

MIOCENE

C. aculeata Martin in Jeannet and Martin, 1937: 219–220, fig. 3. [Dutch East Indies, West Pacific Ocean.] C. cojimarensis Lambert and Roig in Sánchez Roig, 1926:32, pl. 3: fig. 3. [Cuba.]

OLIGOCENE

- C. assulaeformis Malaroda, 1951:158-159, pl. 2: figs. 6, 7, 11-13. [Italy.]
- C. pelettensis Castex, 1930:13-14, pl. 1: fig. 1. [France.) (Stampian.)
- C. vepres Lambert, 1931c:79, pl. 3: fig. 22. [West Sarno, Algeria.] (Stampian.)

UPPER OLIGOCENE

C. duncani Socin, 1942:48–49. [India and Somaliland.] (Chattian.)

EOCENE

- C. gymnozona Arnold and H. L. Clark, 1927:9-11, pl. 1: fig. 1-3. [Jamaica, Caribbean Sea.]
- C. sigillum Lambert, 1931c:78, pl. 3: figs. 20-21. [Algiers, North Africa.]

UPPER EOCENE

- C. dubaleni Castex, 1930:12-13. [France.] (Bartonian or Stampian.)
- C. hemispinosa Lambert, 1933d:188–189, pl. 1: figs. 6–9. [Spain.] (Probably Lutetian.)
- C. isnardi Lambert, 1924a:7. [France.] (Bartonian.)

UPPER CRETACEOUS

- C. mahafalensis Besairie, 1930:226, pl. 22: fig. 5. [Madagascar, east coast of Africa.] (Upper Senonian-Campanian.)
- C. majungensis Lambert, 1933a:11-12, pl. 1: figs. 4-7. [Madagascar, east coast of Africa.] (Maestrichtian.)
- C. meslei Lambert, 1931c:72, pl. 3: fig. 17. [Algiers, North Africa.] (Santonian.)

Lower Cretaceous

- C. enissalensis Weber, 1934:30, 81, pl. 5: fig. 1. [Crimea, U.S.S.R.] (Upper Valanginian.)
- C. mullerriedi Lambert, 1935c:365-366, pl. 16: figs. 13-14. [Mexico.] (Aptian.)

C. theodosiae Weber, 1934:33, 34, 81, 82, pl. 5: figs. 10a-e. [Crimea, U.S.S.R.] (Hauterivian-Valanginian.)

TRIASSIC

- C. anellatus De Gregorio, 1930b:29, pl. 6: figs. 12-15. [Italy.]
- C. ecki Assmann, 1925:517-518, pl. 9: figs. 7-10. [Germany.]
- C. longispina Assmann, 1937:22-23, pl. 5: figs. 7-10. [Germany.]
- C. mirandus De Gregorio, 1930b:29, pl. 6: fig. 11. [Italy.]
- C. percostatus De Gregorio, 1930b:29, pl. 6: figs. 16-17. [Italy.]
- C. remifera Assmann, 1937:23-24, pl. 5: fig. 17. [Germany.]
- C. tuberculinus De Gregorio, 1930b:29, pl. 6: figs. 5-6. [Italy.]

UPPER TRIASSIC

- C. aculeata Leonardi and Lovo, 1950:10, pl. 1: fig. 8. [Italy.] (St. Cassian Beds. Karnian.)
- C. crenulata Leonardi and Lovo, 1950:6, pl. 2: figs. 27-29. [Italy.] (St. Cassian Beds. Karnian.)
- C. dorsata Braun var. coronata Leonardi and Lovo, 1950:8, pl. 2: fig. 20. [Italy.] (St. Cassian Beds. Karnian.)
- C. dorsata Braun var. jugulata Leonardi and Lovo, 1950:7-8, pl. 2: figs. 15-19. [Italy.] (St. Cassian Beds. Karnian.)
- C. gilletae Lambert, 1927b:8-9, figs. 1-2. [Mikulschütz, formerly in Silesia, Germany, now in Poland. New name for C. transversa von Meyer (1847:576). Figured by Schauroth (1859:293-294, pl. 1: figs. 8a-d).] (Norian.)
- C. magna Leonardi and Lovo, 1950:5, pl. 2: fig. 26. [Italy.] (St. Cassian Beds. Karnian.)
- C. pusilla f. Leonardi and Lovo, 1950:8, pl. 1: fig.7. [Italy.] (St. Cassian Beds. Karnian.)
- C. pyramidalis Leonardi and Lovo, 1950:10, pl. 2: fig. 25. [Italy.] (St. Cassian Beds. Karnian.)
- C. raibliana Bather var. capitata Leonardi and Lovo, 1950:9, pl. 1: figs. 9–10, pl. 2: figs. 11–14. [Italy.] (St. Cassian Beds. Karnian.)
- C. scrobiculata Braun var. rumerlensis Leonardi and Lovo, 1950:6-7, pl. 1: figs. 3-5. [Italy.] (St. Cassian Beds. Karnian.)

- C. staulinensis Leonardi and Lovo, 1950:6, pl. 2: fig. 30. [Italy.] (St. Cassian Beds. Karnian.)
- C. trigona (Münster) var. cuspidata Leonardi and Lovo, 1950:7, pl. 1: fig. 6. [Italy.] (St. Cassian Beds. Karnian.)
- C. zardinii Leonardi and Lovo, 1950:9-10, pl. 2: figs. 21-24, 26b. [Italy.] (St. Cassian Beds. Karnian.)

PERMIAN

- C. bitauniensis Wanner, 1941:310-311, pl. 26: figs. 7-10, 24. [Timor Island, South Malay Archipelago.]
- C. jonkeri Wanner, 1941:311-312, pl. 26: figs. 11-13. [Timor Island, South Malay Archipelago.]

Genus Dorocidaris A. Agassiz

In the *Treatise* Fell (Durham et al., 1966:U331) considers *Dorocidaris* a subjective synonym of *Cidaris*.

RECENT

D. lorioli Koehler, 1927:21–23, pl. 3: figs. 2–5.[Andaman Islands, Bay of Bengal.]

MIOCENE

D. henjamensis Clegg, 1933:17-18, pl. 2: figs. 3a-c. [Persia (Iran).]

OLIGOCENE

D. exilis Lambert, 1931c:79, pl. 3: fig. 23. [Algiers, North Africa.]

CRETACEOUS

D. molineti Lambert, 1931e:299–300, fig. 3, pl. 17: figs. 14–15. [Cuba.]

UPPER CRETACEOUS

D. basseae Besairie and Lambert, 1930:115, pl. 9: figs. 7-9. [Zululand, East Africa.] (Turonian.)

- D. besairiei Lambert, 1936c:23, pl. 3: figs. 1-6. [Madagascar, off East Africa.] (Upper Campanian.)
- D. ciryi Lambert, 1935f:513-515, pl. 57: figs. 1-2. [Spain.] (Cenomanian.)
- D. demujiensis Sánchez Roig, 1949:30, pl. 1: fig. 1. [Cuba.]
- D. eybrunnensis Dacqué, 1939:79, pl. 3: fig. 12. [Germany.] (Lower Turonian to Upper Cenomanian.)
- D. garciai Sánchez Roig, 1952c:2, pl. 1: fig. 3. [Cuba.]
- D. madrugensis Sánchez Roig, 1949:29–30, 32, pl.l: figs. 2, 4. [Havana, Cuba.]
- D. taouzenis Lambert, 1933b:61, pl. 2: figs. 1-3. [North Africa.] (Cenomanian.)

LOWER CRETACEOUS

- D. bitakensis Weber, 1934:37, 82, pl. 6: figs. 2a-e. [Crimea, U.S.S.R.] (Barremian.)
- D. urcustensis Weber, 1934:38-39, 82-83, pl. 6: figs. 4a-h. [Crimea, U.S.S.R.] (Hauterivian.)

Genus Balanocidaris Lambert

LOWER CRETACEOUS

- B. darderi Lambert, 1935b:360, pl. 41: fig. 8. [Spain.] (Aptian.)
- Cidaris (Balanocidaris) deserti El-Din Mahmoud, 1955:158-159, pl. 18: figs. 1-3. [Egypt.] (Middle Albian.)
- B. tingitana Lambert, 1933b:62, pl. 2: figs. 7-9. [North Africa.] (Valanginian.)

UPPER JURASSIC

B. japonica Nisiyama, 1966:166–167, pl. 1: figs. 15–18. [Japan.] (Probably Callovian to Tithonian.)

MIDDLE JURASSIC

B. besairiei Lambert, 1933a:9, pl. 1: figs. 1-3. [Madagascar, east coast of Africa.] (Perhaps Lower Bajocian.)

UPPER TRIASSIC

- B. migliorinii Venzo, 1934b:157-158, pl. 13: figs. 13a-b. [Rhodes Island, Southeastern Aegean Sea.] (Ladinian-Raiblian.)
- B. subdorsata Venzo, 1934b:156-157, pl. 13: figs. 11-12. [Rhodes Islands, Southeastern Aegean Sea.] (St. Cassian Beds to Raiblian. Karnian.)

Genus Cyathocidaris Lambert

UPPER CRETACEOUS

C. septemtrionalis Schmitz, 1970:37-38, pl. 1: figs. 1-2. [Northern Germany.] (Senonian.)

Genus Eucidaris Pomel

RECENT

- E. australiae Mortensen, 1950a:291–293, figs. 1–4, pl. 8: figs. 5–7, pl. 9: figs. 3, 5, 6. [Western Australia.]
- E. clavata Mortensen, 1928:73. [St. Helena and Ascension, off west coast of Africa, South Atlantic Ocean.]
- E. tribuloides (Lamarck) africana f. attenuata A. M. Clark, 1955:51, pl. 2. [Gold Coast of Africa.]

LOWER MIOCENE/OLIGOCENE

E. strombilata Fell felli Philip, 1963d:202, pl. 22: figs. 1, 2, 5, 9. [Southeastern Australia.] (Janjukian and Longfordian(?).)

LOWER OLIGOCENE

E. coralloides Fell, 1954:46, pls. 11B, 11C. [New Zealand.] (Whaingaroan.)

LOWER OLIGOCENE/UPPER EOCENE

E. strobilata Fell, 1954:47-48, pls. 8A, 8E-H, 8J, 10B, 11E. [New Zealand.]

Genus Hesperocidaris Mortensen

RECENT

- Hesperocidaris Mortensen, 1928:73, 74. [California, U.S.A., Western Panama and Ecuador.] Typespecies: Dorocidaris panamensis A. Agassiz.
- H. asteriscus H. L. Clark, 1948:233-234, pl. 36: fig. 4, pl. 37: figs. 5-6. [Panama, off Medidor Island.]
- H. houstoniana A. H. Clark, 1939:12-16, pl. 4: figs. 10-11, pl. 5: figs. 12-14. [Galápagos Islands, off Ecuador.]

Genus Kionocidaris Mortensen

RECENT

- Kionocidaris Mortensen, 1932b:165. Type-species: K. striata Mortensen, 1932b:165–168, figs. 9, 11–12, pl. 5: fig. 7, pl. 9: figs. 4–6, pl. 11: figs. 3, 9, pl. 12: figs. 1–2, pl. 13: figs. 4, 6–7. [Natal coast, Africa.]
- K. striata Mortensen var. teretispina Mortensen, 1932b:168, fig. 10, pl. 13: fig. 5. [Natal coast, Africa.]

Genus Lissocidaris Mortensen

RECENT

Lissocidaris Mortensen, 1939b:11-12. Type-species: L. fusca Mortensen, 1939b:12-14, figs. 5-6, pl. 3: figs. 1-3, pl. 5: fig. 2, pl. 6: figs. 1, 2, 6, 19. [Maldive Islands, off southern India.]

Genus Paracidaris Pomel

UPPER JURASSIC

- P. loppei Castex, 1947:26, pl. 1: fig. 1. [France.] (Upper Sequanian.)
- P. nunlisti Jeannet, 1927:393–396, pl. 12: figs. 1–6b. [Switzerland.] (Argovian.)

MIDDLE JURASSIC

P. lagorgettei Lambert, 1933c:173-174, pl. 7: figs. 5-7. [France.] (Callovian.)

UPPER TRIASSIC

P. jeanneti Lambert, 1924c:448-450, figs. 1-2. [Switzerland.] (Rhaetian.)

Genus Plegiocidaris Pomel

- S. bracteata (A. Agassiz) var. albidens H. L. Clark, 1925a:23-24. [Ceylon, west of Kaltusa and Macclesfield Bank, Indian Ocean.]
- S. bracteata (A. Agassiz) var. mauritiana Mortensen, 1932b:161-162, pls. 7-8, pl. 9: figs. 10-11, pl. 12: figs. 3-5, 7. [Mauritius, Indian Ocean.]
- S. cingulata Mortensen, 1932b:162–164, figs. 7–8, pl. 1: fig. 6, pl. 11: fig. 6, pl. 13: figs. 8–10. [Indian Ocean.]
- S. effluens Mortensen, 1927b:285-292, fig. 19, pl. 59: fig. 3, pl. 62: figs. 1-2, pl. 65: figs. 1-4, pl. 75: figs. 1-2, pl. 80: figs. 1-6. [Malaysia.]

Lower Cretaceous

- P. biassalensis Weber, 1934:11, 12, 78, pl. 2: figs. 1a-k. [Crimea, U.S.S.R.] (Barremian.)
- P. lamberti Weber, 1934:13, 79, pl. 12: figs. 1a-c. [Crimea, U.S.S.R.] (Barremian-Hauterivian.)
- P. lemoinei Lambert in Démoly, 1928:142, pl. 1: figs. 9-13. [France.] (Hauterivian.)
- P.? orientalis El-Din Mahmoud, 1955:159, pl. 18: figs. 4, 7. [Egypt.] (Middle Albian.)

JURASSIC

P. huguenini Lambert, 1931c:60-61. [France.]

UPPER JURASSIC

- P. helviorum Lambert, 1932:262-263. [France.] (Tithonian? or Argovian.)
- P. kuchkaensis Weber, 1934:9, 78, pl. 1: figs. 4a-d. [Crimea, U.S.S.R.] (Rauracian.)
- P. vogdti Weber, 1934:11, 78, pl. 1: figs. 7a-c. [Crimea, U.S.S.R.] (Rauracian.)

MIDDLE JURASSIC

P. ardesica Thiéry in Thiéry, Lambert and Collignon, 1928:90-91, pl. 21: fig. 15. [France.] (Callovian.)

- P. babeaui Cotteau var. granulosa Mercier, 1932: 149, pl. 2: fig. 5. [France.] (Upper Bathonian.)
- P. bifrons Lambert, 1936c:12, pl. 1: figs. 10-11. [Madagascar, off East Africa.] (Bathonian.)
- P. caeuliculus Lambert, 1936c:11-12, pl. 1: figs. 1-3. [Madagascar, off East Africa.] (Bathonian.)
- P. jacobi Basse and Lambert in Lambert, 1936c:11, pl. 4: figs. 1-3, 8. [Madagascar, off East Africa.] (Callovian.)
- P. mercieri Lambert, 1933b:30–32, pl. 3: figs. 6–7. [North Africa.] (Lower Bathonian.)
- P. pseudohorrida Lambert, 1936c:12, pl. 1: fig. 9. [Madagascar, off East Africa.] (Bathonian.)
- P. welschi Lambert, 1935a:523–524, pl. 26: fig. 4. [France.] (Lower Bajocian.)

LOWER JURASSIC

- P. marizensis Lambert, 1937:40, pl. 1: fig. 3. [Morocco. It was described without a specific name in 1933b, Notes and Memoires, 27:29, pl. 1: fig. 5.] (Domerian to late Pliensbachian.)
- P. morierei Cotteau var. nodosa Mercier, 1937c:21-22, pl. 1: figs. 12-13. [France.] (Toarcian.)
- P. telrhemtensis Lambert, 1937:41, pl. 1: fig. 4. [Morocco.] (Toarcian.)
- P. termieri Lambert, 1937:39-40, pl. 1: figs. 1-2. [Morocco.] (Pliensbachian.)
- P. tingitana Lambert, 1933b:29–30, pl. 1: figs. 11–12. [North Africa.] (Aalenian.)

UPPER TRIASSIC

P. raibliana (Bather) var. rhodiensis Venzo, 1934b: 159–160, pl. 13: figs. 14–15. [Rhodes Island, Southeastern Aegean Sea.] (Raiblian. Karnian.)

Genus Stylocidaris Mortensen

RECENT

- S. amboinae Mortensen, 1928:71. [Amboina, off Mindanao, Indonesia.]
- S. annulosa Mortensen, 1927b:296–299, fig. 21, pl. 63: fig. 1, pl. 64: figs. 1–3, pl. 65: fig. 8, pl. 75: fig. 3, pl. 80: figs. 7–11. [China Sea.]
- S.(?) fusispina Mortensen, 1928:72-73. [Sagami Sea and Kagoshima Gulf, Japan.]

- S. laevispina Mortensen, 1939b:15–17, figs. 7–8, pl. 2: fig. 5, pl. 4: figs. 1, 5, pl. 5: fig. 6, pl. 6: figs. 7, 10, 11. [Indian Ocean.]
- S.(?) longicollis Mortensen, 1928: 72. [Amirante Islands, east of Tanganyika, Indian Ocean.]
- S. maculosa Mortensen, 1928:72. [Sagami Sea, Japan.]
- S. reini (Döderlein) var. cladothrix Mortensen, 1927b:293-295, fig. 20, pl. 65: figs. 5-7, pl. 66: fig. 1, pl. 67: fig. 1, pl. 75: fig. 4. [Malaysia.]
- S. reini (Döderlein) var. rubida Mortensen, 1927b: 295–296, pl. 63: figs. 2–3, pl. 74: figs. 6–7. [Malaysia.]
- S. rufa Mortensen, 1928:71-72. [Hawaii.]

TERTIARY

S. (?) chapmani Philip, 1963d:198-201, figs. 1b-c, 2a, pl. 22: figs. 6-8. [Southeastern Australia.] (Pre-Oligocene, pre-Janjukian.)

Genus Menocidaris Philip

MIOCENE

Menocidaris Philip, 1964:468–469. Type-species: M. compta Philip, 1964: 469–471, fig. 6, pl. 59: fig. 5, pl. 61: fig. 1, pl. 67: fig. 1. [Southeastern Australia.]

Family PSYCHOCIDARIDAE Ikeda

Psychocidaridae Ikeda, 1936b:486, pls. 33–34. Typegenus: Psychocidaris Ikeda. [Malaysia(?).]

Genus Psychocidaris Ikeda

RECENT

Psychocidaris Ikeda, 1935b:386. Type-species: P. ohshimai Ikeda, 1935b: 386-388, fig. 1. [Malaysia, Bonin Islands, Southeastern Asia.]

Genus Caenocidaris Thiéry

MIDDLE JURASSIC

Caenocidaris Thiéry, 1928:180. Type-species: Cidaris cucumifera Agassiz. [Europe.] (Bajocian.)

Genus Merocidaris Thiéry

MIDDLE JURASSIC

Merocidaris Thiéry, 1928:180. Type-species: Cidaris honorinae Cotteau. [Europe.] (Kimmeridgian-Bajocian.)

Genus Tylocidaris Pomel

PALEOCENE

- T. macneili Cooke, 1959:12–13, pl. 1: figs. 3–5. [Alabama, U.S.A.] (Clayton Fm.)
- T. pomifer (Boll) herupensis Wind, 1954:484, pl. 13: figs. 55–58. [Scandinavia.] (Upper Danian.)
- T. pomifer (Boll) var. masoviensis Kongiel, 1958:5, 19, figs. 1-7, pl. 1: figs. 4-15. [Denmark.] (Danian.)
- T. ravni Brotzen, 1959:47–49, figs. 14c, 14d, pl. 2: figs. 2–16. [Sweden.] (Middle Danian.)
- T. rosenkrantzi Brotzen, 1959:45, figs. 15a, 15b, pl. 2: figs. 17–36. [Sweden.] (Middle Danian.)
- T.? salina Cooke, 1959:12, pl. 1: figs. 12-14. [Alabama, U.S.A.] (Salt Mt. Ls.)
- T. windi Brotzen, 1959:47, figs. 16a, 16b, pl. 1: figs. 20–23. [Sweden.] (Lower Danian.)

Family DIPLOCIDARIDAE Gregory

Genus Diplocidaris Desor

LOWER CRETACEOUS

D. bicarinata Weber, 1934:28, 81, pl. 4: figs. 7a-k. [Crimea, U.S.S.R.] (Hauterivian.)

MIDDLE JURASSIC

- D. besairiei Lambert, 1936b:116-117, pl. 6: figs. 1-10. [Madagascar, off East Africa.] (Bajocian.)
- D. dubari Lambert, 1937:44-45, pl. 4: figs. 6-7. [Morocco.] (Bajocian to Bathonian.)
- D. mauritanicus Jeannet, 1936b:607-611, figs. 1-2, pl. 37: figs. 1-3. [Morocco, North Africa.] (Bathonian to Bajocian.)
- D. romani Mercier in Roché, 1939:304, fig. 10. [France.] (Bajocian.)

LOWER JURASSIC

D. menchikoffi Lambert, 1937:43-44, pl. 1: figs. 5-7. [Morocco.] (Upper Domerian.)

Order Uncertain

Family Uncertain

Genus Lanternarius Regnéll

MIDDLE SILURIAN

Lanternarius Regnéll, 1956:171-172. Type-species: L. latens Regnéll, 1956:173-175, fig. 4, pl. 2: figs. 4-6. [Sweden.] (Wenlockian.)

Subclass EUECHINOIDEA Bronn

Superorder DIADEMATACEA Duncan

Order ECHINOTHURIOIDA Claus

Family ECHINOTHURIIDAE Thomson

Subfamily ECHINOTHURIINAE Thomson

Genus Araeosoma Mortensen

RECENT

- A. alternatum Mortensen, 1934a:164. [Off the Somali Coast, Indian Ocean.]
- A. coriaceum Agassiz var. indicum Koehler, 1927: 37–39, pl. 7: fig. 5, pl. 8: fig. 3, pl. 24: fig. 3. [Indian Ocean.]
- A. owstoni Mortensen var. nudum Mortensen, 1934a:164. [Malaysia, Philippines, off Cape Vazella, Annam.]
- A. parviungulatum Mortensen, 1934a:164. [Celebes Island, Buton Strait, Malaysia.]
- A. paucispinum H. L. Clark, 1925c:4-5, pl. 2. [Off Natal Coast, South Africa.]
- A. splendens Mortensen, 1934a:164. [Off Kei Islands, Malaysia.]
- A. tessellatum (A. Agassiz) var. carinatum Mortensen, 1934a:163. [Off South Luzon, China Sea.]

PALEOCENE

(?) A. mortenseni Ravn, 1928:37-38, pl. 4: figs. 42-45. [Denmark.] (Danian.)

UPPER CRETACEOUS

(?) A. brunnichi Ravn, 1928:36–37, pl. 4: figs. 36–38. [Denmark.] (Upper Senonian.)

Genus Asthenosoma Grube

RECENT

- A. dilatatum Mortensen, 1934a:165. [Off Jolo Island, Malaysia.]
- A. intermedium H. L. Clark, 1938:378-380, pl. 26: figs. 2-3. [Great Barrier Reef, Australia.]
- A. periculosum Endean, 1964:95-100, fig. 1, pl. 12: figs. 1-2. [Queensland, Australia.]
- A. varium Grube album Mortensen, 1934a:165. [Off Tual, Kei Islands, Malaysia.]

UPPER CRETACEOUS

A.(?) striatissimum Ravn, 1928:39, pl. 4: figs. 40-41. [Denmark.] (Upper Senonian.)

Genus Calveriosoma Mortensen

RECENT

Calveriosoma Mortensen, 1934a:163. Type-species: Calveria hystrix Thomson. [North Atlantic-North Pacific.]

Genus Hapalosoma Mortensen

RECENT

H. gemmiferum Mortensen, 1934a:165. [Japanese Seas.]

Genus Sperosoma Koehler

RECENT

S. antillense Mortensen, 1934a:163. [Off Barbados (Island), Caribbean Sea.]

- S. armatum Koehler, 1927:43-46, pl. 8: figs. 1, 6, pl. 25: fig. 3. [Indian Ocean.]
- S. crassispinum Mortensen, 1934a:163. [Molucca Passage, Malaysia.]
- S. tristichum Mortensen, 1934a:163. [Celebes Sea, Malaysia.]

Genus Echinosoma Pomel

RECENT

In the *Treatise* Fell (Durham et al., 1966:U346–U347) considers *Echinosoma* an objective synonym of *Tromikosoma*.

E. australe Koehler, 1926:38–43, pl. 107: figs. 1–2, pl. 108: figs. 1–2, pl. 109: figs. 9–10, pl. 121: fig. 2. [South Pacific.]

Subfamily PHORMOSOMATINAE Mortensen

Genus Phormosoma Thomson

RECENT

P. placenta Thomson var. africana Mortensen, 1934a:162. [Off South Africa.]

Genus Hemiphormosoma Mortensen

RECENT

Hemiphormosoma Mortensen, 1934a:162. Typespecies: H. paucispinum Mortensen, 1934a:162. [Sulu Sea, Malaysia.]

Genus Paraphormosoma Mortensen

RECENT

Paraphormosoma Mortensen, 1934a:163. Type-species: Phormosoma alternans de Meijere. [Indonesia.]

Order DIADEMATOIDA Duncan

Family DIADEMATIDAE Gray

Genus Diadema Gray

RECENT

- D. clarki Ikeda, 1939b:165–166, pl. 11: figs. 1–4. [Japan.]
- D. palmeri Baker, 1967:240-243, fig. 1, pls. 1-2. [Northern New Zealand.]

LOWER MIOCENE

D. vetus Lambert, 1931c:84, pl. 3: fig. 26. [Algiers, North Africa.] (Aquitanian.)

UPPER EOCENE

D.? principeana Weisbord, 1934:41–43, pl. 3: figs. 11–13. [Cuba.]

Genus Astropyga Gray

RECENT

- A. magnifica A. H. Clark, 1934:52-53. [Florida, U.S.A.]
- A. nuptialis Tommasi, 1958:85-87, figs. 1-3. [San Pablo, Brazil.]

Genus Centrostephanus Peters

RECENT

- C. asteriscus Agassiz and Clark var. malayanus Mortensen, 1939a:549–550; 1940b:313, pl. 37: figs. 1–2, pl. 76: figs. 5–9, 13, 19–21. [Kei Islands, Indonesia.]
- C. besnardi Bernasconi, 1955:92. [Island of Trinidad, Brazil.]
- C. nitidus Koehler, 1927:53-60, pl. 9: figs. 4-10, pl. 10: figs. 1, 3, 4, 8, 9, pl. 26: fig. 2. [Indian Ocean.]

LOWER MIOCENE

C. sacyi Lambert, 1928b:85-86, fig. 1. [France.] (Langhian-Burdigalian.)

Genus Chaetodiadema Mortensen

RECENT

- C. africanum H. L. Clark, 1925c:2-3, pl. 1. [Off Natal Coast, South Africa.]
- C. keiense Mortensen, 1939a:549; 1940b:226-229, pl. 32: figs. 3-8, pl. 72: figs. 1-5. [Kei Islands, Indonesia.]
- C. sundararaji Devanesen, 1930:249. [Probably Indian Ocean.]

Genus Eodiadema Duncan

Lower Jurassic

- E. lacostei Lambert, 1933b:41-44, pl. 1: figs. 14-17. [North Africa.]
- E. thorali Petitot, 1961[1959]:35-36, pl. 2: figs. 10-13. [Morocco.] (Domerian-late Pliensbachian.)

Genus Eremopyga Agassiz and Clark

RECENT

E. debilis Mortensen, 1940a:34-35; 1940b:213-215, pl. 26: figs. 3, 4, pl. 27: figs. 1-4, pl. 71: fig. 12. [Malaysia.]

Genus Goniodiadema Mortensen

RECENT

Goniodiadema Mortensen, 1939a:549; 1940b:237. Type-species: G. mauritiense Mortensen, 1939a: 549; 1940b:238-241, pl. 28: figs. 1-2, pl. 73; figs. 8, 17-20. [Mauritius, Indian Ocean.]

Genus Kierechinus Philip

LOWER EOCENE

Kierechinus Philip, 1963b:1104–1109, figs. 1–3. Type-species: Pedinopsis melo Kier. [British Somaliland, East Africa.] (Upper Auradu.)

Genus Palaeodiadema Pomel

PALEOCENE/UPPER CRETACEOUS

P.(?) multiforme Ravn, 1928:49-52, pl. 5: figs. 7-10. [Denmark.] (Danian to Upper Senonian.)

P. gauthieri Lambert, 1931c:70-71, pl. 3: fig. 14. [Algiers, North Africa.] (Turonian.)

Family MICROPYGIDAE Mortensen

Genus Micropyga A. Agassiz

RECENT

M. nigra H. L. Clark, 1925a:47-48, pl. 3: fig. 3, pl. 4: figs. 1-2. [New Britain, Bismarck Archipelago, South Pacific.]

Family ASPIDODIADEMATIDAE Duncan

Genus Aspidodiadema A. Agassiz

RECENT

- A. africanum Mortensen, 1939a:548; 1940b:49-51,
 pl. 2: figs. 11-12, pl. 63: figs. 1-4. [Off East London, Union of South Africa.]
- A. annulatum Koehler, 1927:61–63, pl. 11: figs. 1–6. [Invisible Bank, Indian Ocean?]
- A. arcitum Mortensen, 1939a:547-548; 1940b:46-49, pl. 1: fig. 17, pl. 2: figs. 6-10, pl. 64: figs. 13-17. [Off the Hawaiian Islands.]
- A. hawaiiense Mortensen, 1939a:548; 1940b:56-58, pl. 1: fig. 16, pl. 2: figs. 1-5, pl. 63: figs. 5-7. [Hawaiian Islands.]
- A. meijerei Döderlein var. keiense Mortensen, 1939a:548; 1940b:55, pl. 65: figs. 10–12. [Kei Islands, Indonesia.]

Family Uncertain

Genus Ancylocidaris Miller

Upper Jurassic

Ancylocidaris Miller, 1929:335. Type-species: A. spenceri Miller, 1929:335–336, figs. 1–3. [Wyoming, U.S.A.] (Sundance Fm.)

Genus Helodiadema Mortensen

LOWER CRETACEOUS

Helodiadema Mortensen, 1939a:550; 1940b:339–340, fig. 174. Type-species: Cottaldia rotula W. B.

Clark. [Locality unknown.] (Lower Cretaceous in North America.)

Order PEDINOIDA Mortensen

Family PEDINIDAE Pomel

Genus Pedina L. Agassiz

UPPER-MIDDLE EOCENE

P. eocenica Sánchez Roig, 1949:41–42, pl. 3: fig. 6. [Cuba.]

MIDDLE JURASSIC

P. madagascariensis Lambert, 1936c:19, pl. 4: figs. 23-24. [Madagascar, off East Africa.] (Callovian.)

Genus Atlasaster Lambert

In the *Treatise* Fell (Durham et al., 1966:U357) considers *Atlasaster* a subjective synonym of *Pedina*.

LOWER JURASSIC

Atlasaster Lambert, 1931b:19-22. Type-species: A. termieri Lambert, 1931b: 19-22, fig. 3, pl. 2: figs. 1-5. [North Africa.] (Lower Domerian.)

A. jeanneti Lambert, 1937:65-67, fig. 3, pl. 2: fig. 1, pl. 4: figs. 21-22. [Morocco.] (Sinemurian.)

Genus Coenopedina A. Agassiz

RECENT

- C. annulata Mortensen, 1940a:38; 1940b:108-110, pl. 2: figs. 16-18, pl. 3: fig. 1, pl. 68: figs. 1-6, 17, 18. [Malaysia.]
- C. capensis H. L. Clark, 1923:375, fig. 4, pl. 21: figs. 1-2. [South Africa. Clark refers to the genus as Coenopedina Pomel (nom. null.).]
- C. depressa Koehler, 1927:74-76, pl. 12: figs. 7-9. [Indian Ocean. Koehler refers to the genus as Coenopedina Pomel (nom. null.).]
- C. diomedeae Mortensen, 1939a:548-549; 1940b: 110-112, fig. 61, pl. 2: figs. 21-23, pl. 68: figs. 10-14. [Gulf of Panama, off Cape Mala.]

C. superba H. L. Clark, 1925a:52-53, pl. 5: figs. 1-2. [Saya de Malha Banks, Indian Ocean. Clark refers to the genus as Coenopedina Pomel (nom. null.).]

Genus Diademopsis Desor

LOWER JURASSIC

D. behtensis Lambert, 1931b:14, pl. 1: figs. 16-17. [North Africa.] (Lotharingian.)

Genus Hemipedina Wright

CRETACEOUS

H. abreusense Sánchez Roig, 1949:36-37. [Cuba.]

UPPER JURASSIC

H. taurica Weber, 1934:55-56, 85-86, fig. 3, pl. 9: figs. 3a-b. [Crimea, U.S.S.R.] (Sequanian.)

Genus Leiopedina Cotteau

LOWER EOCENE

L. cienagensis Sánchez Roig, 1949:42-43, pl. 3: figs. 3-4. [Cuba. Although Sánchez Roig cites the age as Middle Eocene, Brodermann (1949:324) says this species is Lower Eocene.]

Genus Micropedina Cotteau

UPPER CRETACEOUS

M. olisiponensis (Forbes) var. gongilensis Brighton, 1925:17-19, fig. 5. [Nigeria, West Africa.] (Lower Turonian/Cenomanian?)

Genus Phalacropedina Lambert

UPPER JURASSIC

Hemipedina (Phalacropedina) somaliensis Currie, 1925:61-62, figs. 10, 10a-d, pl. 9: figs. 5a-b. [Somaliland, East Africa.] (Oxfordian-Corallian.)

Genus Pseudorthopsis Sánchez Roig

UPPER CRETACEOUS

Pseudorthopsis Lambert in Sánchez Roig, 1949:9, 37. [Cuba. Although Sánchez Roig says this species is Eocene, Brodermann (1949:312) cites the age as Upper Cretaceous.] Type-species: Echinopedina cubensis Cotteau.

EOCENE

P. rojasi Sánchez Roig, 1953c:137-138, pl. 1: fig. 5. [Cuba].

Genus Pseudopedina Cotteau

LOWER JURASSIC

P. atlantis Lambert, 1931b:15, pl. 1: fig. 13. [North Africa.] (Domerian.)

Genus Stenechinus Arnold and H. L. Clark

EOCENE

Stenechinus Arnold and H. L. Clark, 1927:13. Typespecies: S. regularis Arnold and H. L. Clark, 1927:15-17, pl. 1: figs. 7-9. [Jamaica.]

S. perplexus Arnold and H. L. Clark, 1927:14-15, pl. 1: figs. 4-6. [Jamaica.]

Family Uncertain

Genus Farquharsonia Currie

MIDDLE JURASSIC

Farquharsonia Currie, 1927:416. Type-species: F. somaliensis Currie, 1927:416–420, figs. 3a-d. [Somaliland, East Africa.] (Callovian.)

Order PYGASTEROIDA Durham and Melville

Family PYGASTERIDAE Lambert

Genus Pygaster J. L. R. Agassiz

Lower Cretaceous

P. gerthi Weaver, 1931:171-172, pl. 12: figs. 25-28. [Argentina.] (Aptian or Upper Barremian.)

MIDDLE JURASSIC

- P. daguini Lambert, 1931b:17-19, pl. 2: fig. 6. [North Africa.] (Lower Domerian.)
- P. joleaudi Besairie and Lambert in Lambert, 1933a:10, pl. 2: fig. 7. [Madagascar, off East Africa.] (Callovian.)
- P. langanoides Agassiz ranvillensis Mercier, 1932: 213. [France.] (Upper Bathonian.)
- P. lourdinensis Laube in Lambert, 1926b:121-122, pl. 10: figs. 4a-b. [Switzerland.] (Lower Bathonian.)
- P. microstoma Lambert, 1933b:54–55, pl. 3: fig. 12. [North Africa.] (Toarcian.)

Genus Plesiechinus Pomel

LOWER JURASSIC

P. hawkinsi Jesionek-Szymańska, 1970:416-417, fig. 1A, pl. 1, pl. 2: figs. 1-2. [Nevada, U.S.A.] (Sunrise Fm., Sinemurian.)

Genus Serpianotiaris Jeannet

MIDDLE TRIASSIC

Miocidaris (Serpianotiaris) Jeannet, 1933a:1. Typespecies: M. (S.) hescheleri Jeannet, 1933a:1-7, figs. 1-2, pl. 30: figs. 1-13. [Switzerland. Fell (Durham et al., 1966:U366a) placed this genus in "Order Uncertain" and "Family Uncertain." Kier (in ms.) considers it a miocidarid.] (Ladinian.)

Superorder ECHINACEA Claus

Order SALENIOIDA Delage and Hérouard

Family ACROSALENIIDAE Gregory

Genus Acrosalenia L. Agassiz

MIDDLE JURASSIC

- A. basseae Lambert, 1936c:17-18, pl. 4: figs. 4-6. [Madagascar, off East Africa.] (Callovian.)
- A. gananensis Stefanini, 1932:97-99, pl. 4: figs. 3a-f. [Somaliland, East Africa.] (Inferior Oolite.)
- A. mathildae Lambert, 1935a:526-527, pl. 26: figs. 5-8. [France.] (Callovian.)

- A. microstoma Besairie, 1936:128, pl. 8: figs. 13-14. [Madagascar, off East Africa.] (Upper Bathonian.)
- A. smelliei Currie, 1925:53-54, figs. 4a-b, pl. 8: figs. 5a-b. [Somaliland, East Africa.] (Bathonian.)
- A. termieri Lambert, 1931b:15-16, pl. 1: fig. 11. [North Africa.] (Bajocian, Inferior Oolite.)
- A. wylliei Currie, 1925:52-53, figs. 3a-b, pl. 8: figs. 4a-c. [Somaliland, East Africa.] (Bathonian.)

Lower Jurassic

- A. somaliensis Currie, 1925:50-52, figs. 2a-c, pl. 8: figs. 2a-c, 3. [Somaliland, East Africa.]
- A. zararensis Lambert, 1937:56-57, pl. 1: figs. 12-13. [Morocco.] (Pliensbachian.)

Genus Eurysalenia Kier

UPPER CRETACEOUS

Eurysalenia Kier, 1966a: A63. Type-species: E. minima Kier, 1966a: A63-65, fig. 17. [Wyoming, U.S.A.] (Upper Campanian or lower Maestrichtian.)

Genus Heterosalenia Cotteau

UPPER JURASSIC

H. suatensis Weber, 1934:47-48, 83-84, pl. 7: figs. 8a-c. [Crimea, U.S.S.R.] (Sequanian.)

MIDDLE JURASSIC

H. alloiteaui Zoeke, 1952:249-252, figs. 1-2, pl. 11b: figs. 1-3. [North Africa.] (Bathonian.)

Genus Metacrosalenia Currie

This genus is considered in the *Treatise*, Fell and Pawson (Durham et al., 1966:U325), a subjective synonym of *Heterosalenia* Cotteau.

MIDDLE JURASSIC

Acrosalenia (Metacrosalenia) Currie, 1925:55. Typespecies: Metacrosalenia pseudocidaroides Currie, 1925:55-56, figs. 5a-b, pl. 8: figs. 6a-b. [Somali-

- land, East Africa.] (Bathonian, in Currie (1927: 411).)
- A. (M.) quadrimiliaris Currie, 1927:414-415, figs. 2a-d. [Somaliland, East Africa.]

Genus Polysalenia Mortensen

UPPER CRETACEOUS

Polysalenia Mortensen, 1932a:490. Type-species: P. notabilis Mortensen, 1932a:491–494, figs. 17–22, pl. 4: figs. 1–3. [Sweden.] (Upper Senonian.)

P cottaldi Mortensen, 1932a:494-496, figs. 23-24, pl. 4: figs. 11-13. [Sweden.] (Upper Senonian.)

Genus Recrosalenia Currie

MIDDLE JURASSIC

- Recrosalenia Currie, 1925:47-48. Type-species: R. somaliensis Currie, 1925:48-50, fig. 1, pl. 8: figs. la-e. [Somaliland, East Africa.] (Callovian or Bathonian.)
- R. migiurtina Maccagno, 1947c:90-92, pl. 1: fig. 5. [Harar, Ethiopia.] (Callovian or Bathonian.)

Family SALENIIDAE L. Agassiz

Subfamily SALENIINAE L. Agassiz

Genus Salenia Gray

RECENT

- S. scrippsae Zullo, Kaar, Durham and Allison, 1964: 339–343, figs. 3A–B, 4C–D, 6D–G, pl. 56: figs. 1–3. [Chile.]
- S. sculpta Koehler, 1927:71-73, pl. 11: figs. 10-13, pl. 12: figs. 1, 2, 10, pl. 25: fig. 5. [Indian Ocean.]
- S. unicolor Mortensen, 1934a:166. [Sagami Sea, Japan.]

MIDDLE MIOCENE

S. nipponica Morishita, 1965:64-66, figs. 1-4. [Japan.]

LOWER MIOCENE

S. novemprovincialis Nisiyama, 1966:187–188, pl. 2: figs. 6-9. [Japan.] (Kakinoura Fm.)

LOWER OLIGOCENE

S. schencki Zullo, Kaar, Durham and Allison, 1964: 343-346, figs. 4B, 5, 6A-C, pl. 56: fig. 5. [Oregon, U.S.A.]

EOCENE

S. persica Clegg, 1933:8-10, pl. 1: figs. 3a-d. [Persia, Iran.]

PALEOCENE

S. alta Hassan, 1969:18, pl. 1: figs. 9-10. [Kharga Oasis, Upper Egypt.] (Landanian.)

CRETACEOUS

- S. pseudowhitneyi Ikins, 1940:65-66, pl. 4: figs. 5a-c. [Texas, U.S.A.]
- S. scotti Ikins, 1940:66-67, pl. 5: figs. la-c. [Texas, U.S.A.]
- S. whitneyi Cannon in Ikins, 1940:68-69, pl. 5: figs. 3a-c. [Texas, U.S.A.]

Upper Cretaceous

- S. alcaldei Sánchez Roig, 1949:44, pl. 2: figs. 14-17. [Cuba.] (Maestrichtian.)
- S. hagenowi Nestler, 1965:989-991, figs. 8a-d, pl. 5: figs. 1a-c. [Rügen Island, Baltic Sea.] (Lower Maestrichtian.)
- S. hawkinsi Checchia-Rispoli, 1948:169-172, figs. 1-2, pl. 1: figs. 1-4a. [North Africa.] (Cenomanian.)
- S. hondoensis Cooke, 1953:6, pl. 1: figs. 3-4. [Texas, U.S.A.] (Campanian.)
- S. intermedia Hassan, 1969:16-17, pl. 1: figs. 6-8. [Kharga Oasis, Upper Egypt.] (Upper Maestrichtian.)
- S. lamberti Checchia-Rispoli, 1932a:6-11, fig. 3, pl.2: figs. 1-5a. [North Africa.] (Maestrichtian.)
- S. lobosa Nestler, 1965:991-993, figs. 9a-c, pl. 5: figs. 2a-c. [Rügen Island, Baltic Sea.] (Lower Maestrichtian.)
- S. mathuri Chiplonker, 1937:61-62, pl. 6: figs. 3a-d. [India.] (Lower Cenomanian.)
- S. somaliensis Hawkins, 1935a:48-49, figs. 1-2, pl. 6: figs. 9a-b. [British Somaliland, East Africa.] (Upper Senonian?)

S. trigonopyga Lambert, 1933a:13-14, pl. 1: figs. 25-27. [Madagascar, off East Africa.] (Upper Turonian.)

LOWER CRETACEOUS

- S. cottreaui Lambert, 1931c:63-64, fig. 3, pl. 3: figs. 2-4. [Algiers, North Africa.] (Neocomian.)
- S. dux Wright, 1967:17–19, fig. 2, pl. 1: figs. 1a–d. [Southwestern England.] (Upper Albian.)
- S. kansasense Twenhofel, 1924:52, pl. 7: fig. 7. [Kansas, U.S.A.] (Comanche.)
- S. leanderensis Ikins, 1940:64-65, pl. 4: figs. 4a-c. [Texas, U.S.A.] (Comanchean.)
- S. phillipsae Whitney and Kellum, 1966:249-250, pl. 1: figs. 4-6. [Texas, U.S.A.] (Trinity Group. Aptian.)
- S. similis White lastroensis Maury, 1936:268–269. [Brazil.] (Middle Albian.)
- S. stenzeli Ikins, 1940:67-68, pl. 5: figs. 2a-c. [Texas, U.S.A.] (Comanchean.)

UPPER JURASSIC

S. taurica Weber, 1934:59-60, 86, fig. 5, pl. 9: figs. 6a-d. [Crimea, U.S.S.R.] (Sequanian.)

Genus Salenocidaris A. Agassiz

RECENT

- S. brachygnatha Mortensen, 1934a:166. [Off Kermadec Islands, Southwest Central Pacific Ocean.]
- S. hastigera (A. Agassiz) var. acuminata Mortensen, 1934a:166. [Malaysia.]
- S. incrassata Mortensen, 1934a:166. [Gulf of Tomini, Celebes Island, Malaysia.]
- S. miliaris (A. Agassiz) var. indica Mortensen, 1939b:23–24, pl. 6: fig. 9. [Maldive Islands, off southern India, Indian Ocean.]
- S. profundi (Duncan) var. occlusa Mortensen, 1934a:165. [Off Tristan da Cunha Island, South Atlantic Ocean.]

Genus Salenidia Pomel

PALEOCENE

S. danica Ravn, 1928:45-47, pl. 5: figs. 5a-c. [Denmark.] (Danian.)

- S. karakachi Weber, 1934:61-62, 86, fig. 7, pl. 9: figs. 8a-g. [Crimea, U.S.S.R.] (Danian.)
- S. selandica Ravn, 1928:48–49, pl. 5: figs. 6a-c. [Denmark.] (Danian.)

UPPER CRETACEOUS

- S. chabaudi Castex, 1947:30, pl. 1: figs. 16–19. [France.] (Maestrichtian.)
- S. scabra Nestler, 1965:987-989, figs. 7a-f, pl. 4: figs. 4-7. [Rügen Island, Baltic Sea.] (Lower Maestrichtian.)

Genus Valsalenia Mortensen

PALEOCENE

Valsalenia Mortensen, 1934a:165. Type-species: Salenia garumnensis Valette. [France.] (Lower Danian.)

UPPER CRETACEOUS

V. marquassuzaai Castex, 1947:28-29, pl. 1: figs. 7-9. [France.] (Maestrichtian.)

Genus Peltastes L. Agassiz

In the *Treatise* Fell and Pawson (Durham et al., 1966:U379) consider *Peltastes* an objective synonym of *Hyposalenia* Desor.

PALEOCENE

P. ultimus Ravn, 1928:39-41, fig. 11, pl. 4: fig. 39. [Denmark.] (Danian.)

Genus Goniophorus L. Agassiz

UPPER CRETACEOUS

- G. scotti Lambert in Scott, 1926:185–186. [Texas, U.S.A. Further described and illustrated in Lambert, 1927a:268; in Adkins, 1928:278, pl. 12: fig. 8; in Cooke, 1946:202, pl. 31: figs. 8–9.]
- G. whitneyi Ikins, 1940:69-70, pl. 5: figs. 4a-c. [Texas, U.S.A.] (Comanchean.)

Order HEMICIDAROIDA Beurlen

Family HEMICIDARIDAE Wright

Genus Hemicidaris L. Agassiz

UPPER CRETACEOUS

H. palmirensis Sánchez Roig, 1949:34–35, pl. 1: figs. 8–9. [Cuba.]

LOWER CRETACEOUS

H. villadai Maldonado-Koerdell, 1953:27–28, pl. 1: figs. 22–24. [Mexico.] (Aptian.)

UPPER JURASSIC

- H. crenularis (Lamarck) var. alta Kongiel, 1957: 13–14, 47, 62–63, pl. 2: figs. 5–6. [Pomerania, on the Baltic Sea.] (Upper Kimmeridgian.)
- H. crenularis (Lamarck) var. major Lambert, 1933c: 177, pl. 7: fig. 12. [France.] (Rauracian.)
- H. pilleti Lambert, 1927c:365. [France.] (Tithonian.)
- H. sundancensis Miller, 1928:143-146, figs. 1-4. [Wyoming, U.S.A.] (Sundance Fm.)
- H. tithonica Lambert, 1927c:364, fig. 1. [France.] (Tithonian.)

MIDDLE JURASSIC

- H. bihinensis Currie, 1925:59-60, fig. 8, pl. 9: figs. 3a-b. [Somaliland, East Africa.] (Bathonian.)
- H. castillionensis Lambert, 1933c:177, pl. 7: figs. 3-4. [France.] (Upper Bathonian.)
- H. jaisalmerensis Sahni and Bhatnagar in Sahni, 1955:187. [Rajasthan, Northwest Indian Union.] (Callovian.)
- H. luciensis d'Orbigny var. hourcqi Lambert, 1936c:17. [Madagascar, off East Africa.] (Bathonian.)
- H. luciensis Cotteau oolithicus Mercier, 1932: 120–121, 166–167, fig. 19, pl. 4: figs. 6a-b. [France.] (Middle Bathonian.)

Lower Jurassic

H. termieri Lambert, 1931b:13-14, pl. 1: figs. 7-12. [North Africa.] (Lower Domerian.)

Genus Asterocidaris Cotteau

MIDDLE JURASSIC

- A. besairiei Lambert, 1936c:16, pl. 1: figs. 22-24. [Madagascar, off East Africa.] (Callovian.)
- A. ragoti Lambert, 1936c:15, pl. 4: figs. 11–13. [Madagascar, off East Africa.] (Callovian.)

Genus Gymnocidaris L. Agassiz

MIDDLE JURASSIC

- G. gortanii Maccagno, 1947c:95-96, pl. 2: figs. 15, 15a-b. [Harar, Ethiopia.] (Bathonian/Callovian.)
- G. lamberti Mercier, 1932:162–163, pl. 3: figs. 8a-c. [France.] (Upper Bathonian.)
- G. madagascariensis Lambert, 1936b:118–119, pl.6: figs. 13–16. [Madagascar, off East Africa.](Bajocian.)
- G. pustulosa Agassiz nuda Mercier, 1932:161, pl.3: fig. 7. [France.] (Upper Bathonian.)

Genus Hessotiara Pomel

MIDDLE JURASSIC

H. zuberi Jeannet, 1953:176–177, pl. 1: figs. 1–5. [Switzerland.] (Lower Callovian.)

Genus Heterodiadema Cotteau

UPPER CRETACEOUS

- H. libyca Desor asiatica Stefanini, 1928:164–166, pl. 19: figs. 4, 5, 6a-c, 7a-d, 8a-b. [Karakorum, Mongolia.] (Cenomanian.)
- H. libycum Desor var. nigeriense Lambert, 1938b:87–89, pl. 6: figs. 9, 9a–b. [Niger territory, French West Africa.] (Upper Cenomanian.)

Genus Pseudocidaris Étallon

LOWER CRETACEOUS

P. simulans Nisiyama, 1950b:29-30, pl. 4: figs. 1-2. [Japan.] (Aptian/Albian.)

JURASSIC

- P. defilippii Stefanini, 1928:161–164, pl. 19: figs. 2a–e. [Karakorum, Mongolia.]
- P. gortanii Maccagno, 1947b:121–122, fig. 1c, pl.1: fig. 8. [Somaliland, East Africa.]
- P. migliorinii Maccagno, 1947b:118–120, fig. 2, pl.1: figs. 7–7a. [Somaliland, East Africa.]

UPPER JURASSIC

- P. tetragranulatus Currie, 1925:57–58, figs. 6a-b, pl. 8: figs. 7a-c. [Somaliland, East Africa.] (Kimmeridgian.)
- P. vogdti Weber, 1934:43-44, 83, pl. 7: figs. 3a-h. [Crimea, U.S.S.R.] (Tithonian.)

MIDDLE JURASSIC

- P. checchiai Maccagno, 1947c:92-95, pl. 1: figs. 6, 6a-b, pl. 2: figs. 13-13a. [Harar, Ethiopia.] (Bathonian/Callovian.)
- P. collignoni Lambert, 1936c:13-14, pl. 1: figs. 12-16. [Madagascar, off East Africa.] (Upper Bathonian.)
- P. levis Lambert, 1936c:13, pl. 4: fig. 7. [Madagascar, off East Africa.] (Callovian.)
- P. truncata Lambert, 1936c:14, pl. 1: figs. 18-21. [Madagascar, off East Africa.] (Upper Bathonian.)

LOWER JURASSIC

- P. dubari Lambert, 1937:49, fig. 1, pl. 1: fig. 9. [Morocco.] (Lower Liassic.)
- P. leckwycki Lambert, 1937:50–51, pl. 4: figs. 8–9. [Morocco.] (Tithonian.)

Genus Spherotiaris Lambert and Thiéry

UPPER JURASSIC

S. vivaldii Besairie, 1930:197-198, pl. 11: figs. 4-7. [Madagascar, off East Africa.] (Upper Callovian/lower Lusitanian.)

MIDDLE JURASSIC

S. meandrina Agassiz var. nervosa Lambert, 1937: 52-53, pl. 4: fig. 11. [Morocco.] (Bajocian.)

S. meandrina Agassiz var. termieri Lambert, 1937: 51-52, pl. 4: fig. 10. [Morocco.] (Upper Bajocian.)

Lower Jurassic

- S. gignouxi Mercier, 1937c:24-25, pl. 1: figs. 17-18. [France.] (Domerian.)
- S. precincta Lambert, 1933b:36, pl. 3: fig. 9. [North Africa.] (Domerian.)

Family PSEUDODIADEMATIDAE Pomel

Genus Pseudodiadema Desor

Lower Cretaceous

- P. elevatus Whitney and Kellum, 1966:254-256, pl. 2: figs. 7-9. [Texas, U.S.A.] (Trinity Group. Aptian.)
- P. grangeri Maury, 1936:270-271, pl. 2: figs. 1-2. [Brazil.] (Middle Albian.)
- P. whitneyi Ikins, 1940:72-73, pl. 6: figs. la-c. [Texas, U.S.A. Cooke (1946:206) placed this species in Loriolia.] (Comanchean.)

UPPER JURASSIC

P. kselensis Devriès, 1956b:284–287, pls. 1–2. [Algiers, North Africa.] (Lusitanian.)

LOWER JURASSIC

- P. amellagense Lambert, 1937:59-60, pl. 4: figs. 19-20. [Morocco.] (Upper Domerian to late Pliensbachian.)
- P. renzi Jeannet, 1928c:221; 1928d:461–462, pl. 36: figs. 12–14, 16–18. [Switzerland.] (Lower Toarcian.)

UPPER TRIASSIC

P. silbinense Stefanini, 1923:51-55, pl. 5: figs. 1a-g, 2a-c. [Italy.] (Rhaetian.)

Genus Acrocidaris L. Agassiz

Lower Cretaceous

A. arginensis Weber, 1934:54, 85, pl. 8: figs. 6a-b. [Crimea, U.S.S.R.] (Hauterivian.)

UPPER JURASSIC

- A. borissiaki Weber, 1934:51-53, 84-85, pl. 8: figs. 3a-h. [Crimea, U.S.S.R.] (Sequanian.)
- A. cazioti Lambert, 1926a:72-74, fig. 1. [France.] (Tithonian.)

MIDDLE JURASSIC

A. crenulata Mercier, 1935:29. [France.] (Bajocian.)

Genus Diplopodia M'Coy

UPPER CRETACEOUS

- D. cretacica Sánchez Roig, 1949:35, pl. 1: figs. 10-11. [Cuba.]
- D. gigantea Checchia-Rispoli, 1945 [1943]:88-89,pl. 1: figs. 5-6. [Somaliland, East Africa.] (Cenomanian.)
- D. gileadensis Blanckenhorn, 1925 [1924]:86, pl.7: figs. 3a-b. [Palestine, Israel.] (Upper Cenomanian.)
- D. inexspectata Checchia-Rispoli, 1943b:317-318, fig. 1. [Somaliland, East Africa.] (Cenomanian.)

LOWER CRETACEOUS

- D. balkhanensis Vialov, 1930:876-879, 900, pl. 1: figs. la-b, 2. [Asiatic Russia.] (Upper Hauterivian/lower Barremian.)
- D. balkhanensis Vialov var. aberans Vialov, 1930: 880-881, 900, pl. 1: figs. 3a-b, 4. [Asiatic Russia.] (Upper Hauterivian/lower Barremian.)
- D. elegans Corroy, 1925:315-316, pl. 4: figs. 22-24. [France.] (Hauterivian.)
- D. gentili Lambert, 1931c:27, pl. 2, fig. 1. [North Africa.] (Barremian.)
- D. kultchitskyi Vialov, 1930:881-883, 900-901, pl.1: figs. 6a-c. [Asiatic Russia.] (Upper Hauterivian.)
- D. langei Vialov, 1930:888-889, 901, pl. 1: figs. 8a-c. [Asiatic Russia.] (Upper Hauterivian.)
- D. renngarteni Vialov, 1930:883-885, 901, pl. 1: figs. 7a-b. [Asiatic Russia.] (Upper Hauterivian.)
- D. vassilievskyi Vialov, 1930:885-888, 901-902, pl.2: figs. 1a-c. [Asiatic Russia.] (Upper Hauterivian.)

Genus Hypodiadema Desor

UPPER JURASSIC

- Hemicidaris (Hypodiadema) gregoryi Currie, 1925: 58-59, fig. 7, pl. 9: figs. 2a-d. [Somaliland, East Africa.] (Corallian/Kimmeridgian.)
- H. (H.) macfadyeni Currie, 1935a:44-45, pl. 6: figs. 2a-d. [British Somaliland, East Africa.] (Bathonian/Argovian.)

LOWER JURASSIC

H. dubari Lambert, 1933b:39-40, fig. 1. [North Africa.] (Domerian.)

Genus Loriolia Neumayr

UPPER CRETACEOUS

L. clarki Cooke, 1946:206, pl. 31: figs. 13-14. [Texas, U.S.A. For Heterodiadema ornatum Clark, 1915.] (Washita Group.)

LOWER CRETACEOUS

L. rosana Cooke, 1946:205-206, pl. 31: figs. 15-17. [Texas, U.S.A.] (Trinity Group.)

MIDDLE JURASSIC

L. inaequalis Agassiz var. bathonica Mercier, 1932: 183-184, pl. 5: figs. 13a-b. [France.] (Upper Bathonian.)

Genus Pedinopsis Cotteau

LOWER EOCENE

P.(?) melo Kier, 1957b:845, figs. 1a-b, pl. 103: figs. 4-5. [British Somaliland, East Africa.] (Upper Auradu Series.)

Lower Cretaceous

- P. engerrandi Ikins, 1940:62, pl. 4: figs. 2a-c. [Texas, U.S.A.] (Comanchean.)
- P. texana Cooke, 1955:90-91, pl. 19: figs. 1-6. [Texas, U.S.A.] (Upper Albian.)

P. yarboroughi Ikins, 1940:62-63, pl. 4: figs. 3a-c. [Texas, U.S.A.] (Comanchean.)

Genus Polydiadema Lambert

EOCENE

P.(?) joaquinensis Alex Clark in Grant and Hertlein, 1938b:17–18, pl. 15: figs. 8–9. [U.S.A.] (Sierra Blanca Stage.)

LOWER CRETACEOUS

P. karakachi Weber, 1934:50-51, 84, pl. 8: figs. 2a-f. [Crimea, U.S.S.R.] (Hauterivian.)

UPPER CRETACEOUS

Leptarbacia andreui Sánchez Roig, 1949:35-36, pl. 2: figs. 1-2. [Cuba. See Fell and Pawson in the Treatise (Durham et al., 1966:U389). Leptarbacia Clark and Twitchell, 1915, is considered a synonym of Polydiadema Lambert.]

Genus Polypedina Lambert

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U389) consider *Polypedina* a subjective synonym of *Polydiadema* Lambert.

LOWER JURASSIC

Polypedina Lambert, 1933b:46. Type-species: P. tounatensis Lambert, 1933b:46-47, fig. 2, pl. 1: figs. 6-7. [North Africa.] (Lower Domerian.)

Genus Tetragramma L. Agassiz

UPPER CRETACEOUS

- T. besairiei Lambert, 1933a:13, pl. 1: figs. 23-24. [Madagascar, off east coast of Africa.] (Upper Turonian.)
- T. bosei Jones, 1938:130, pl. 12: figs. 6-7. [Mexico.] (Indidura Fm.)
- T. tafermense Lambert, 1931c:94-95, pl. 3: fig. 33. [Tunis.] (Cenomanian.)

LOWER CRETACEOUS

T. cornueli Corroy, 1925:405–406, pl. 4: figs. 19–21. [France.] (Upper Barremian.)

T. giganteum Lambert, 1935f:522-523, pl. 58: fig.

I. [Spain.] (Aptian.)

T. hourcqi Collignon, 1950:7-8, pl. 1: figs. 1-2b. [Madagascar, off East Africa.] (Albian.)

UPPER JURASSIC

T. pomeraniae Kongiel, 1957:20-22, 50-51, 65-67, pl. 4: figs. 1-3. [Pomerania, on Baltic Sea.] (Lower Kimmeridgian.)

MIDDLE JURASSIC

T. antsingyensis Lambert, 1936c:19, pl. 1: figs. 28-30. [Madagascar, off East Africa.] (Callovian.)

Genus Trochotiara Lambert

UPPER CRETACEOUS

T. russoi Lambert, 1931c:27, pl. 1: figs. 20-21. [North Africa.] (Cenomanian.)

Order PHYMOSOMATOIDA Mortensen

Family PHYMOSOMATIDAE Pomel

Genus Phymosoma Haime

EOCENE

P. peloria Arnold and H. L. Clark, 1927:18-20, pl. 2: figs. 1-3. [Jamaica.]

UPPER EOGENE

- P. conceptionis Sánchez Roig, 1952c:3, pl. 1: figs. 1-2. [Cuba.]
- P. dixie Cooke, 1941a:17, pl. 2: fig. 15, pl. 4: figs. 1-2, 9. [U.S.A.]

MIDDLE EOCENE

P. gigantea Sánchez Roig, 1953c:136, pl. 1: fig. 1. [Cuba.]

PALEOCENE

- P. subconicum Ravn, 1928:59-60, pl. 6: fig. 5. [Denmark.] (Danian.)
- P. trinitensis Cooke, 1961:10-11, pl. 2: figs. 1-3. [Trinidad, Caribbean Ocean.]

CRETACEOUS

P. bybeei Ikins, 1940:71-72, pl. 5: figs. 5a-c. [Texas, U.S.A.]

UPPER CRETACEOUS

- P. mortenseni Checchia-Rispoli, 1932a:11-15, figs.4-6, pl. 2: figs. 7-19. [North Africa.] (Maestrichtian.)
- P. paronai Checchia-Rispoli, 1933b:11-14, figs. 5-7, pl. 2: figs. 4-7. [North Africa.] (Maestrichtian.)
- P. raguini Lambert, 1931c:28-29, pl. 1: figs. 22-23. [North Africa.] (Cenomanian.)
- P. riograndensis Maury, 1925:508-509, pl. 24: figs. 11-12. [Brazil.]
- P. solignaci Lambert, 1931c:95, pl. 4: figs. 1-3. [North Africa.] (Santonian.)
- P. tinocoi Marchesini Santos, 1960:18-20, fig. 4, pl. 5: figs. 1-3. [Brazil.] (Turonian.)
- P. unicarinatum Lambert, 1933b:66, pl. 3: figs. 10–11. [North Africa.] (Santonian.)

UPPER JURASSIC

P. cadenati Castex, 1947:27-28, pl. 1: figs. 10-15. [France.] (Upper Sequanian.)

Genus Cyphosoma L. Agassiz

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U395) consider *Cyphosoma* a synonym of *Phymosoma* Haime.

UPPER CRETACEOUS

- C. palaestinense Blanckenhorn, 1925 [1924]:87-88, pl. 7: figs. 4-6. [Palestine, Israel.] (Upper Turonian/lower Santonian.)
- C. riograndensis Maury var. parahybensis Maury, 1930:112-115, pl. 5: figs. 3, 5. [Brazil.] (Maestrichtian.)

Lower Cretaceous

C. sanctaeluciae Maury, 1936:266-267, pl. 4: figs. 4-5. [Brazil.] (Middle Albian.)

Genus Dixieus Cooke

Fell and Pawson (Durham et al., 1966:U396), in the *Treatise*, consider Dixieus a subjective synonym of *Phymosoma* Haime.

UPPER EOCENE

Dixieus Cooke, 1948:606-607. Type-species: Phymosoma dixie Cooke. [North America.]

Genus Gauthieria Lambert

PALEOCENE

G.(?) parva Kongiel, 1936a:2-3, 8. [Poland.] (Lower Siwak. Danian.)

UPPER CRETACEOUS

G. sadeki Lambert, 1931d:191, pl. 5: figs. 46-47. [Egypt.] (Cenomanian.)

Genus Glyptocidaris A. Agassiz

LOWER PLIOCENE

G. crenularis A. Agassiz stenozona Nisiyama, 1966: 194-195, pl. 2: figs. 10-11. [Japan.] (Kurotaki Fm.)

Subgenus Glyptocidaris (Eoglyptocidaris) Nisiyama

OLIGOCENE/EOCENE

Glyptocidaris (Eoglyptocidaris) Nisiyama, 1966: 195–196. Type-species: G. (E.) arctina Nisiyama, 1966:196–197, fig. 7, pl. 3: figs. 5–7. [Japan.] (Paronai Fm.)

Genus Jacquiertia Mercier

LOWER JURASSIC

Jacquiertia Mercier, 1937a:419-420. Type-species: Hemipedina parvula Tornquist. (Toarcian.)

Mortensen and Mercier (1939) determined that the specimen Mercier identified as Hemipedina parvula Tornquist and for which he erected his genus Jacquiertia does not really belong to this species. Tornquist's species has perforate tubercles, whereas Mercier's has imperforate tubercles. Therefore, they erected a new species Jacquiertia minuta Mortensen and Mercier, and considered it the typespecies of Jacquiertia. In the Treatise, Fell and Pawson (Durham et al., 1966:U400) likewise consider J. minuta as the type-species of Jacquiertia; however, because Mercier in his original description of Jacquiertia designated Hemipedina parvula Tornquist as the type-species, it remains the typespecies regardless of the identity of the particular specimens upon which Mercier based his generic description. If the type specimens of Hemipedina parvula Tornquist belong to Eodiadema as suggested by Mortensen (1940b:177), then Jacquiertia is a subjective synonym of Eodiadema. If the type specimens of Jacquiertia minuta Mortensen and Mercier is generically distinct, then a new genus must be erected for this species.

J. minuta Mortensen and Mercier, 1939:59-61, figs.1-2. [France.] (Charmouthien.)

Genus Narindechinus Lambert

MIDDLE EOCENE

Narindechinus Lambert, 1933a:30-31. Type-species: N. checchiai Lambert, 1933a:31, fig. 3, pl. 1: figs. 29-30. [Madagascar, off East Africa.] (Lutetian.)

Genus Polyplacidia Poretskaya

EOCENE

Polyplacidia Poretskaya, 1968a:287–289. Typespecies: P. armenica Poretskaya, 1968a:290–293, figs. 1–6, pl. 1: figs. 1a–b, pl. 2: figs. 1a–c. [Armenia, U.S.S.R.]

Genus Porosoma Cotteau

EOCENE

P. kahleri Collignon, 1930:544-546, pl. 31: figs. 1, la-b. [Austria.]

P. lamberti Checchia-Rispoli, 1950b:22-24, pl. 1: figs. 1-1b. [East Africa, Migiurtinia, Northeast Somalia.]

MIDDLE EOCENE

P. lamberti Checchia-Rispoli, 1950a [1945–1946]: 22–24, pl. 1: figs. 1, la-b. [Somaliland, East Africa.]

UPPER CRETACEOUS

- P. batalleri Lambert, 1933d:185-186, fig. 1, pl. 1: figs. 10-13. [Spain.] (Maestrichtian.)
- P. reesidei Cooke, 1953:6-7, pl. 1: figs. 5-8. [Wyoming, U.S.A.] (Coniacian.)

Genus Rachiosoma Pomel

PALEOCENE

- R. krimica Weber, 1934:64, 86–87, pl. 10: figs. 3a-c. [Crimea, U.S.S.R.] (Danian.)
- R. pulaviense Kongiel, 1939:27-29, pl. 3: figs. 7-10. [Poland.] (Lower to middle Danian.)

UPPER CRETACEOUS

- R. cottreaui Lambert, 1936c:24, pl. 2: figs. 16-17. [Madagascar, off East Africa.] (Maestrichtian.)
- R. hondoensis Cooke, 1953:8-9, pl. 3: figs. 4-5. [Texas, U.S.A.] (Upper Maestrichtian.)
- R. stagnorum Lambert, 1931c:69, pl. 3: figs. 12-13. [Algiers, North Africa.] (Cenomanian.)

Subgenus Rachiosoma (Rosadosoma) Marchesini Santos

Cretaceous

R. (Rosadosoma) Marchesini Santos, 1960:13-14. [For type Phymosoma riograndensis Maury.]

Genus Winkleria Engel

Engel provisionally refers this genus to the Phymosomatidae.

UPPER CRETACEOUS

Winkleria Engel, 1964b:207. Type-species: W. maastrichtensis Engel, 1964b:207-210, figs. 1-4, pl. 1: figs. 1-10. [Netherlands.] (Maestrichtian.)

Genus Thylechinus Pomel

OLIGOCENE

T. sethuramae Vredenburg, 1922:414, pl. 30: fig. 3. [Burma.]

UPPER EOCENE

T. humei Lambert, 1931d:198, pl. 5: figs. 5-7. [Egypt.] (Priabonian?)

LOWER EOCENE

- T. chardoni Lambert and Roch in Lambert, 1937: 83-85, pl. 3: figs. 1-5. [Morocco.]
- T. dubari Lambert, 1937:85, pl. 4: figs. 24-25. [Morocco.]

Subgenus Thylechinus (Egyptechinus) Lambert

The subgenus Egyptechinus Lambert is considered by Fell and Pawson (Durham et al., 1966:U403) a synonym of Thylechinus (Mistechinus) de Loriol.

MIDDLE EOCENE

Thylechinus (Egyptechinus) Lambert, 1935e:41. Type-species: by monotypy Egyptechinus cuvillieri Lambert, 1935e:41, pl. 1: figs. 4–6. [Egypt.] (Upper Lutetian.)

Family STOMECHINIDAE Pomel

Genus Stomechinus Desor

JURASSIC

S. daguini Lambert, 1933b:50–51, pl. 1: fig. 21, pl. 3: fig. 5. [North Africa.]

UPPER JURASSIC

S. pulchellus Frenguelli, 1944:1-11, pl. 1: figs. 1-3. [Argentina.] (Tithonian.)

MIDDLE JURASSIC

- S. bajocensis Lambert and Jeannet, 1928b:170. [France.] (Bajocian.)
- S. lemoinei Lambert, 1931d:180-181, pl. 5: figs. 39-40. [Egypt.] (Bathonian.)
- S. magnicornicolus Cooke, 1947:473-475, figs. 1-6. [U.S.A.] (Bajocian.)
- S. polyporus Agassiz nanus Mercier, 1932:198, pl.6: fig. 6. [France.] (Upper Bathonian.)

Genus Circopeltis Pomel

UPPER CRETACEOUS

S. senessei Lambert in Lambert and Valette, 1934: 50-51, pl. 6: figs. 11-12. [France.] (Coniacian.)

Genus Diplechinus Lambert

Lower Jurassic

Diplechinus Lambert, 1931b:15–16. Type-species: D. hebbriensis Lambert, 1931b:16–17, pl. 1: figs. 14–15. [North Africa, Morocco.] (Lower Domerian.)

Genus Echinotiara Pomel

UPPER CRETACEOUS

E. perebaskinei Lambert in Lambert and Pérébaskine, 1929:472-474, pl. 38: figs. 1-5. [North Africa.] (Maestrichtian.)

MIDDLE JURASSIC

E. somaliensis Currie, 1927:420-422, figs. 4a-f. [Somaliland, East Africa.] (Bathonian.)

LOWER JURASSIC

E. arabica Melville, 1955:393–401, figs. 1–7, pl. 19: figs. la-5b. [Arabia.] (Lower Toarcian.)

Genus Gomphechinus Pomel

UPPER CRETACEOUS

G. collignoni Lambert, 1933a:15, pl. 2: figs. 1-3. [Madagascar, off east coast of Africa.] (Maestrichtian.)

Genus Jeannetia Mercier

Lower Jurassic

Jeannetia Mercier, 1937a:421–422. Type-species: J. mortenseni Mercier, 1937a:422–424, fig. 2. [France.] (Hettangian.)

Genus Parastomechinus Philip

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U404) consider *Parastomechinus* a synonym of *Jeannetia* Mercier.

MIDDLE JURASSIC

Parastomechinus Philip, 1963c:1111-1112. Typespecies: P. brightoni Philip, 1963c:1112-1115, figs. 1-3, 5. [Wyoming, U.S.A.] (Twin Creek Fm. Bajocian/Callovian.)

Genus Noetlingaster Vredenburg

UPPER CRETACEOUS

N. globulus Devriès, 1967:173–174, pl. 1: figs. 7–9, pl. 2: figs. 10–13, pl. 4: figs. 6–11. [Turkey.]

N. hemisphaericus Devriès, 1967:174-175, pl. 1: figs. 3, 6, 9, pl. 2: figs. 14-16, pl. 4: figs. 12-14. [Turkey.]

N. lamberti Checchia-Rispoli, 1930b:20, figs. 12–14, pl. 1: fig. 2, pl. 3: fig. 1, pl. 4: fig. 1. [Africa.] (Maestrichtian.)

N. millosevichi Checchia-Rispoli, 1930b:14, figs. 6-11, pl. 2: figs. 3-4. [Africa.] (Maestrichtian.)

N. sanfilippoi Checchia-Rispoli, 1930b:6, figs. 1-5, pl. 1: fig. 1, pl. 3: fig. 2, pl. 4: fig. 2. [Africa.] (Maestrichtian.)

Genus Phymotaxis Lambert and Thiéry

UPPER OLIGOCENE/UPPER EOCENE

P. mansfieldi Cooke, 1941a:18, pl. 3: figs. 12-13, pl.4: figs. 6-8. [U.S.A.]

Genus Polycyphus L. Agassiz and Desor

JURASSIC

P. rimuensis Stefanini, 1928:169-172, pl. 19: figs. 3a-g. [Karakorum, Mongolia.]

MIDDLE JURASSIC

P. hourcqi Lambert, 1936c:20, pl. 1: figs. 31–32. [Madagascar, off East Africa.] (Bathonian.)

Genus Psephechinus Pomel

JURASSIC

P. globosus Lambert, 1931c:18–19, pl. 1: figs.: 14–16. [North Africa.]

MIDDLE JURASSIC

P. mazetieri Mercier, 1932:201–202, fig. 13, pl. 7: fig. 2. [France.] (Upper Bathonian.)

P. newtoni Lambert, 1933a:10. [Madagascar, off East Africa.] (Callovian.)

LOWER JURASSIC

P. renzi Jeannet, 1928c:221; 1928d:462–463, pl. 36: figs. 10–11, 15. [Corfu Island, in Ionian Sea off northwest Greece.] (Lower Toarcian to upper Malm.)

Genus Stomopneustes L. Agassiz

OLIGOCENE

S. pristinus Jackson, 1937:229-230, pl. 12: fig. 1. [Mexico.]

UPPER EOCENE

S. antiquus Nisiyama, 1966:199-201, pl. 2: figs. 14-17, pl. 3: figs. 1-4. [Japan.] (Lutetian.)

Genus Tiarechinopsis Lambert

MIDDLE JURASSIC

Tiarechinopsis Lambert, 1936b:119. Type-species: T. besairiei Lambert, 1936b:120, pl. 6: figs. 17-21. [Madagascar, off East Africa.] (Bajocian.)

Genus Triadechinus Arnold and H. L. Clark

EOCENE

Triadechinus Arnold and H. L. Clark, 1927:20–21. Type-species: T. multiporus Arnold and H. L. Clark, 1927:21–22, pl. 1: figs. 10–11. [Jamaica, Caribbean Sea.]

Genus Leiosoma Cotteau

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U408) consider *Leiosoma* an objective synonym of *Trochalosoma*.

EOCENE

L. chondra Arnold and H. L. Clark, 1927:17–18, pl. 2: figs. 4–6. [Jamaica, Caribbean Sea.]

UPPER EOCENE

L. guadalupense Sánchez Roig, 1949:48-49, pl. 2: figs. 3-4. [Cuba.] (Although Roig considers it to be Eocene, Brodermann (1949:324) says it is Upper Eocene.)

Family Uncertain

Genus Boletechinus Cooke

UPPER CRETACEOUS

B. mcglameryae Cooke, 1955:93, fig. 4, pl. 28: figs. 11-16. [Alabama, U.S.A.] (Upper Maestrichtian.)

Order ARBACIOIDA Gregory

Family ARBACIIDAE Gray

Genus Arbacia Gray

PLIOCENE

A. rivuli Cooke, 1941a:10–11, pl. 1: figs. 4–6. [U.S.A.] (Waccamaw Fm.)

A. waccamaw Cooke, 1941a:10, pl. 1: figs. 1-3. [U.S.A.] (Waccamaw Fm.)

UPPER MIOCENE

A. crenulata Kier, 1963:11-15, figs. 3-7, pl. 1: figs. 1-5. [Florida, U.S.A.] (Tamiami Fm.)

Genus Arbia Cooke

UPPER OLIGOCENE

Arbia Cooke, 1948:606. Type-species: Coelopleurus aldrichi W. B. Clark. [Alabama, U.S.A.]

Genus Atopechinus Thiéry

MIDDLE JURASSIC

Atopechinus Thiéry in Thiéry, Lambert and Collignon, 1928:100–101. Type-species: A. cellensis Thiéry in Thiéry, Lambert and Collignon, 1928: 100–101, pl. 31: fig. 16. [France.] (Bathonian.)

Genus Baueria Noetling

PALEOCENE

B. tessieri Roman and Debant, 1962a:245; 1962b: 591-593, fig. 1, pl. 22b. [Senegal, West Africa.] (Lower Danian.)

Genus Codiopsis L. Agassiz

UPPER CRETACEOUS

C. doma Desmarets var. conicus Smiser, 1935b:34, pl. 2: fig. 10. [Belgium.] (Cenomanian.)

- C. douvillei Vidal, 1921:9, pl. 2: fig. 5, pl. 4: fig. 9. [Spain.] (Santonian.)
- C. fontei Vidal, 1921:10, pl. 1: figs. 20-22. [Spain.] (Maestrichtian.)
- C. pierrensis Smiser, 1935b:35-36, pl. 3: figs. 2a-h. [Belgium.] (Maestrichtian.)
- C. senessei Lambert in Lambert and Valette, 1934: 52-53, pl. 6: figs. 13-15. [France.] (Upper Turonian to Coniacian.)
- C. stephensoni Cooke, 1953:8, pl. 1: figs. 9-11. [Texas, U.S.A.] (Upper Maestrichtian.)

Lower Cretaceous

C. sellardsi Ikins, 1940:60-61, pl. 4: figs. la-c. [Texas, U.S.A.] (Comanchean.)

Genus Coelopleurus L. Agassiz

RECENT

- C. granulatus Mortensen, 1934a:167. [Japan, Bay of Ambon.]
- C. undulatus Mortensen, 1934a:166-167. [Sagami Sea, Japan.]
- C. undulatus Mortensen var. polymorphus Mortensen, 1934a:167. [Korea Strait, Japan.]
- C. undulatus Mortensen var. ruber Mortensen, 1934a:167. [Macclesfield Bank, Malaysia.]
- C. vittatus Koehler, 1927:64-70, pl. 10: figs. 2, 5-7, 10, pl. 25: fig. 6, pl. 26: fig. 1. [Indian Ocean.]

MIOCENE

C. singularis Nisiyama, 1966:205-206, pl. 1: figs. 21-23. [Japan.] (Shirahama Fm.)

LOWER MIOCENE

C. melitensis Zammit-Maempel, 1969:42-46, fig. 1, pl. 6. [Malta.]

UPPER EOCENE

C. carolinensis Cooke, 1941a:9, pl. 2: figs. 1-3. [U.S.A.]

UPPER CRETACEOUS

C. castroi Maury, 1930:114-117, pl. 5: fig. 4. [Brazil.] (Campanian.)

Genus Cotteaudia Lambert and Thiéry

Lower Cretaceous

C. royoi Lambert, 1928a:149-153, pl. 3: figs. 1-5. [Spain.] (Aptian.)

Genus Murravechinus Philip

MIOCENE

Murravechinus Philip, 1965:183-186. Type-species: Coelopleurus paucituberculatus Gregory. [Southeast Australia.]

Genus Glypticus L. Agassiz

UPPER JURASSIC

G. buxtorfi Koechlin, 1947:83; 1948:334-336, figs. 1-2. [Switzerland.] (Upper Sequanian.)

Genus Goniopygus L. Agassiz

Cretaceous

- G. ameri Lambert, 1931e:301, pl. 17: fig. 16. [West Indies, Cuba.]
- G. sanchezi Lambert, 1931e:300-301, pl. 17: figs. 17-18. [Cuba, West Indies.]

UPPER CRETACEOUS

- G. coutini Lambert, 1931c:29, pl. 1: figs. 24-25. [North Africa.]
- G. cubanus Sánchez Roig, 1952c:2-3, pl. 1: fig. 9. [Cuba.]
- G. jeanneti Sánchez Roig, 1949:54–55, pl. 2: figs. 7–8. [Cuba.]
- G. lamberti Kühn, 1925:178-179, 186-187, fig. 1, pl. 11: fig. 1. [Austria.] (Upper Santonian.)
- G. lemoinei Lambert, 1933a:16, pl. 2: figs. 4-6. [Madagascar, off East Africa.] (Upper Turonian.)
- G. madrugensis Sánchez Roig, 1949:53-54, pl. 2: figs. 11-12. [Cuba.]

G. supremus Hawkins, 1924:313-316, pl. 18: figs. 1-2. [Jamaica, West Indies.] (Cenomanian-Turonian.)

LOWER CRETACEOUS

- G. atavus Nisiyama, 1950b:30-32, pl. 4: figs. 3-4. [Japan.] (Aptian/Albian.)
- G. bolaensis Jones, 1938:132, pl. 13: figs. 5-6, 8. [Mexico.] (Aurora Fm.)
- G. royoi Lambert, 1928a:155-157, fig. 1. [Spain.] (Aptian.)
- G. stocktonensis Smiser, 1936:459, pl. 62: figs. 7, 16. [Texas, U.S.A.] (Comanchean.)
- G. zitteli Clark telostocensis Maldonado-Koerdell, 1953:38-39, pl. 2: figs. 38-40. [Mexico.] (Aptian.)

Subgenus Tetragoniopygus Fell and Pawson

PALEOCENE-CRETACEOUS

G. (Tetragoniopygus) Fell and Pawson in Durham et al., 1966:U412, fig. 306(4). [Europe, North America, Caribbean.] Type-species: Goniopygus supremus Hawkins.

Genus Magnosia Michelin

Upper Jurassic

M. cottreaui Lambert, 1931d:182, pl. 5: figs. 41–42. [Egypt.]

MIDDLE JURASSIC

- M. jacobi Mercier, 1932:207-208, pl. 7: fig. 8. [France.] (Middle Bathonian.)
- M. mortenseni Lambert, 1936c:20, pl. 1: figs. 33-34. [Madagascar, off East Africa.] (Callovian.)
- M. termieri Lambert, 1931c:19-20, pl. 1: figs. 17-18. [North Africa.] (Vesulian, Middle Bathonian.)

Order TEMNOPLEUROIDA Mortensen

Family GLYPHOCYPHIDAE Duncan

Genus Ambipleurus Lambert

UPPER EOCENE

Ambipleurus Lambert, 1931d:198. Type-species:

Dictyopleurus douvillei Lambert. [Europe, Egypt, West Pakistan.] (Priabonian.)

LOWER EOCENE

A. rotundatus Kier, 1957b:847, figs. 1e-g, pl. 103: fig. 9. [British Somaliland, East Africa.] (Upper Auradu Series.)

Genus Medocechinus Jeannet

UPPER EOCENE

- Medocechinus Jeannet, 1935b:559–560; 1936:3. Type-species: M. fabrei Jeannet, 1935b:559–560; 1936:3, figs. 1–2, pl. 1: figs. 1–3, pl. 2: figs. 1–4. [France.] (Upper Lutetian.)
- M. castexi Jeannet, 1936a:7-9, figs. 6-10, pl. 1: figs. 8-10. [France.] (Upper Lutetian.)
- M. daguini Jeannet, 1936a:5-7, figs. 3-5, pl. 1: figs. 4-7, pl. 2: figs. 10-12. [France.] (Upper Lutetian.)

Genus Arachniopleurus Duncan and Sladen

MIDDLE EOCENE

A. istrianus Innocenti, 1924:43–44, pl. 2: figs. 7–10. [Istria (Peninsula), Yugoslavia.]

Genus Dictyopleurus Duncan and Sladen

UPPER EOCENE

- D. duncani Lambert, 1931d:198. [India.]
- D. douvillei Lambert, 1931d:197–198, pl. 5: figs. 1–4. [Egypt.] (Priabonian.)

Genus Echinopsis L. Agassiz

LOWER EOCENE

- E. friryi Lambert in Lambert and Jacquet, 1936: 346-348, pl. 21: figs. 6-8. [Senegal, West Africa.]
- E. jacqueti Lambert in Lambert and Jacquet, 1936: 348, pl. 21: fig. 9. [Senegal, West Africa.]

Genus Hebertia Michelin

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U416) consider *Hebertia* a subjective synonym of *Echinopsis* L. Agassiz.

UPPER OLIGOCENE

H. jacksoni Lambert in Sánchez Roig, 1949:39-40, pl. 2: figs. 9-10. [Cuba.]

MIDDLE EOCENE

H. simplex Hawkins, 1924:317-318, pl. 18: figs. 4-5. [Jamaica, West Indies.]

UPPER CRETACEOUS

- H. calvachei Sánchez Roig, 1949:40, pl. 3: figs. 1-2. [Cuba.]
- H. pentagona Sánchez Roig, 1949:40–41, pl. 4: figs.
 1–2. [Cuba. Erroneously referred elsewhere in text (page 40 and plate explanation) to "Pseudorthosis".]

Genus Hemidiadema L. Agassiz

MIDDLE JURASSIC

H. mortenseni Maccagno, 1947b:116-118, pl. 1: figs. 6, 6a-b. [Somaliland, East Africa.] (Callovian-Oxfordian.)

Genus Radiocyphus Cotteau

EOCENE

R. hungaricus Thirring, 1936:58-59, pl. 2: fig. 15. [Hungary.]

Family TEMNOPLEURIDAE A. Agassiz

Genus Temnopleurus L. Agassiz

RECENT

- T. australis H. L. Clark, 1928:458-461, fig. 138. [South Australia.]
- T. hardwickii (Gray) var. impressus Mortensen, 1942:226. [Gulf of Tschili, China.]
- T. michaelseni (Döderlein) var. viridis H. L. Clark, 1938:382. [Western Australia.]

MIOCENE/PLIOCENE

T. iranicus Douglas, 1928:11-12, pl. 12: fig. 11. [Persia (Iran).] (Upper Fars Fm.)

MIOCENE

- T. latidunensis Clegg, 1933:18-19, pl. 2: figs. 5a-c. [Persian Gulf.]
- T. persica Clegg, 1933:21–23, fig. 2, pl. 2: figs. 7a–d. [Persia (Iran).]
- T. sundaicus Jeannet in Lambert and Jeannet, 1935:19–22, figs. 4–6, pl. 1: figs. 29–34, pl. 3: figs. 3–10. [Java, Indonesia.]

Genus Prymnechinus Koehler

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U418) consider *Prymnechinus* a subjective synonym of *Temnopleurus* L. Agassiz.

RECENT

Prymnechinus Koehler, 1927:109. Type-species: P. proctalis Koehler, 1927:110–112, pl. 17: figs. 11–12, 14. [Andaman Islands, Bay of Bengal, Indian Ocean.]

Genus Coptopleura Ikeda

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U418) consider *Coptopleura* a subjective synonym of *Temnopleurus* (*Toreumatica*) Gray.

RECENT

Coptopleura Ikeda, 1940:93. Type-species: C. sema Ikeda, 1940:93–96, pl. 6: figs. 1–5. [Malaysia, Southeast Asia.]

Genus Amblypneustes L. Agassiz

RECENT

A. pallidus (Lamarck) var. subglobosus Mortensen, 1942:227. [Southwest Australia.]

UPPER OLIGOCENE

A. corrali Lambert and Roig in Sánchez Roig, 1949:46, pl. 2: fig. 13. [Cuba.]

Genus Arbacina Pomel

OLIGOCENE

A. blancheti Lambert in Castex, 1930:17–18, pl. 1, figs. 2–4. [France.]

Genus Asaphechinus Philip

MIOCENE

Asaphechinus Philip, 1969:240-242. Type-species: A. murrayensis Philip, 1969:242-243, figs. 2a-c, 2e-g, pl. 5: figs. 1-4, 6, 7, pl. 12: fig. 5. [Southeast Australia.] (Lonfordian.)

PLIOCENE/MIOCENE

A. singletoni Philip, 1969:244-247, figs. 3a, 3b, 3d, 3f, 3h, 3i, pl. 6: figs. 1-4, 8-12, pl. 12: figs. 3, 4, 7, pl. 13: fig. 4. [Southeast Australia.] (Cheltenhamian.)

MIOCENE

A. princeps Philip, 1969:243-244, figs. 3c, 3e, 3g, pl. 5: figs. 8-10, pl. 12: fig. 5, pl. 14: figs. 1-3. [Southeastern Australia.] (Lonfordian.)

OLIGOCENE

A. tasmanensis Philip, 1969:247-248, figs. 8g-i, pl. 6: figs. 5-7, pl. 15: fig. 2. [Southeast Australia.] (Janjukian.)

Genus Asterechinus Mortensen

RECENT

Asterechinus Mortensen, 1942:228. Type-species. A. elegans Mortensen, 1942:228. [Malaysia, off Admiralty Island, West Pacific Ocean.]

Genus Brochopleurus Fourtau

MIOCENE/LOWER PLIOCENE

B. pulcherrimus Nisiyama, 1966:237-238, pl. 5: figs. 12-15, pl. 6: figs. 4-5. [Japan.] (Komayama Fm.)

UPPER OLIGOCENE/LOWER MIOCENE

B. australiae Fell, 1949:17-19, pl. 1. [Australia.] (Janjukian.)

Genus Cryptechinus Philip

MIDDLE MIOCENE

Cryptechinus Philip, 1969:236–237. Type-species: Psammechinus (?) humilior Bittner.

Genus Javanechinus Jeannet

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U418) consider *Javanechinus* a synonym of *Desmechinus* H. L. Clark.

MIOCENE

Javanechinus Jeannet in Lambert and Jeannet, 1935:49–50. Type-species: J. rembangensis Jeannet in Lambert and Jeannet, 1935:50–51, figs. 65a, 66–68, pl. 2: figs. 35–37, pl. 4: figs. 17–18. [Java, Indonesia.]

J. erbi Jeannet in Lambert and Jeannet, 1935:51–53, figs. 65b, 69–72, pl. 2: figs. 38–40, pl. 4: figs. 19–20. [Java, Indonesia.]

Genus Erbechinus Jeannet

PLIOCENE

Erbechinus Jeannet in Lambert and Jeannet, 1935: 16. Type-species: E. erbi Jeannet in Lambert and Jeannet, 1935:16–18, figs. 1–2, pl. 1: figs. 23–28, pl. 33: figs. 1–2. [Java, Indonesia.]

MIOCENE

E. gratus Nisiyama, 1966:234-235, fig. 19, pl. 5: figs. 5-8. [Japan.] (Shirahama Fm.)

Genus Genocidaris A. Agassiz

RECENT

- G. incerta H. L. Clark, 1928:457-458, fig. 137. [South Australia.]
- G. splendens Mortensen, 1927c:28-29, figs. 3-9, pl. 2: figs. 3-4. [Canary Islands, off Northwest African coast.]

Genus Grammechinus Duncan and Sladen

MIOCENE/OLIGOCENE

G. meridionalis Philip, 1969:249-250, fig. 2h, pl. 4: figs. 10-13, pl. 14: figs. 5-6. [Southeast Australia.] (Janjukian-Batesfordian.]

Genus Graphepleurus H. L. Clark

MIOCENE

Graphepleurus H. L. Clark, 1945:315. Type-species: G. granularis H. L. Clark, 1945:315-317, pl. 41: figs. F-G. [Fiji, South Pacific Ocean.]

Genus Irenechinus Fell

LOWER MIOCENE

Irenechinus Fell, 1963a:211. Type-species: I. hentyi Fell, 1963a:211–213, pl. 1 (pt.). [Victoria, Australia.]

Genus Lamprechinus Döderlein

RECENT

- L. sculptus Mortensen, 1942:229. [Japan.]
- L. sculptus Mortensen var. hawaiiensis Mortensen, 1942:229. [Polynesian Seas, Hawaii.]

Genus Martinechinus Jeannet

PLEISTOCENE-PLIOCENE

Martinechinus Jeannet in Jeannet and Martin, 1937:232. Type-species: M. molengraaffi Jeannet

in Jeannet and Martin, 1937:233-234, figs. 9a-e. [Timor, South Malay Archipelago.]

Genus Mespilia Desor

RECENT

M. globulus (Linné) var. albida H. L. Clark, 1925a: 93-94. [Locality unknown.]

Genus Microcyphus L. Agassiz

RECENT

- M. ceylanicus Mortensen, 1942:227. [Ceylon and Andaman Islands, Bay of Bengal, Indo-Pacific Ocean.]
- M. excentricus Mortensen, 1940a:46-47; 1943a:161-163, fig. 86, pl. 17: figs. 22-24. [Malaysia.]
- M. keiensis Mortensen, 1942:227. [Kei Islands, Malaysia.]
- M. maculatus L. Agassiz var. godeffroyi Mortensen, 1942:226. [Tonga, Society Islands?, Polynesian Seas.]
- M. pulchellus H. L. Clark, 1928:462–463, fig. 139. [South Australia.]
- M. rousseaui L. Agassiz var. purpuratus Mortensen, 1942:227. [Zanzibar, East Africa.]

MIOCENE

- M. javanus Jeannet in Lambert and Jeannet, 1935: 45–47, figs. 56–59, pl. 2: figs. 19–23. [Java, Indonesia.]
- M. javanus Jeannet var. inornata Jeannet in Lambert and Jeannet, 1935:47, fig. 60, pl. 2: figs. 24–26. [Java, Indonesia.]
- M. melo Jeannet in Lambert and Jeannet, 1935: 47–49, figs. 61–64, pl. 2: figs. 27–29, 32–34. [Java, Indonesia.]

Genus Opechinus Desor

RECENT

- O. albus Mortensen, 1942:228. [Kei Islands, Malaysia.]
- O. albus Mortensen var. virescens Mortensen, 1942: 228. [Off Jolo Island, Malaysia.]

MIOCENE

- O. cheribonensis Jeannet in Lambert and Jeannet, 1935:25-27, figs. 7-9, pl. 1: figs. 37-43, pl. 3: figs. 11-13. [Java, Indonesia.]
- O. collignoni Jeannet in Lambert and Jeannet, 1935:27-29, figs. 10-13, pl. 1: figs. 53-54. [Java, Indonesia.]
- O. madurae Jeannet in Jeannet and Martin, 1937: 228-230, figs. 7-8d. [Dutch East Indies, West Pacific Ocean.] (Jung.)

Genus Pseudopechinus Lambert and Thiéry

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U423) consider *Pseudopechinus* an objective synonym of *Opechinus* Desor.

TERTIARY

- Opechinus (Pseudopechinus) lamberti Jeannet in Lambert and Jeannet, 1935:31-34, figs. 19-26, pl. 1: figs. 47-52, pl. 3: fig. 16, pl. 4: figs. 1-2. [Java, Indonesia.] (Probably Pliocene.)
- O. (P.) lorioli Jeannet in Lambert and Jeannet, 1935:29-31, figs. 14-18, pl. 1: figs. 45-46, pl. 3: figs. 14-15. [Java, Indonesia.] (Probably Pliocene.)

MIOCENE

O. (P.) percultus Desor var. oligoporus Martin in Jeannet and Martin, 1937:232. [Dutch East Indies, West Pacific Ocean.] (Jung.)

Genus Ortholophus Duncan

In the *Treatise* Fell and Pawson (Durham et al., 1966:U424) consider *Ortholophus* a subjective synonym of *Paradoxechinus* Laube.

MIDDLE MIOCENE

- O. morganensis Philip, 1969:255-257, figs. 6a-b, 6h, pl. 7: figs. 1-13. [Southeast Australia.] (Morgan Ls., Batesfordian or Balcombian.)
- O. venustus Philip, 1969:259-260, figs. 6d, 6f, 6g, pl. 9: figs. 1-7, 9, 11-14. [Southeast Australia.] (Batesfordian/Longfordian.)

UPPER EOCENE

O. bittneri Philip, 1969:253-255, figs. 6c, 6e, 6i-j, pl. 11: figs. 13-21, pl. 13: figs. 2-3, 5-7. [Southeast Australia. New name for O. (orig. Coptechinus) lineatus (Bittner, 1892) not O. lineatus Duncan, 1877).] (Tortachilla Ls.)

Genus Paratrema Koehler

RECENT

Paratrema Koehler, 1927:90-91. Type-species: Pleurechinus doederleini Mortensen. [Andaman Islands, Bay of Bengal, Indo-Pacific Ocean.]

Genus Printechinus Koehler

RECENT

- Printechinus Koehler, 1927:97-98. Type-species: P. impressus Koehler, 1927:98-103, pl. 15: figs. 3-11, pl. 27: fig. 2. [Indian Ocean.]
- P. viridis Mortensen, 1942:228. [Malaysia, East of Sumatra.]

PLIOCENE

P. javanus Lambert and Jeannet, 1935:23-24, pl. 1: figs. 35-36, pl. 4: figs. 9-10. [Java, Indonesia.] (Couches de Tremboel.)

Genus Prionechinus A. Agassiz

MIDDLE MIOCENE

P. salomacensis Lambert, 1928b:88, figs. 5-6. [France.] (Helvetian.)

LOWER MIOCENE

P. duvergieri Lambert, 1928b:86-87, figs. 3-4. [France.] (Langhian/Burdigalian.)

Genus Pseudechinus Mortensen

RECENT

P. hesperus H. L. Clark, 1938:395-397, fig. 35, pl. 27: fig. 1. [Western Australia.]

RECENT/PLEISTOCENE

P. flemingi Fell, 1958:36, pl. 3: figs. A, B, pl. 5: fig. a. [South and East New Zealand.]

Genus Notechinus Döderlein

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U425) consider *Notechinus* a subjective synonym of *Pseudechinus*.

RECENT

N. marionis Mortensen, 1936a:221–223, fig. 1, pl. 2: figs. 5–10, pl. 9: figs. 1–4. [Southern Ocean, off Marion Island.]

Pseudechinus (Notechinus) sanctipauli Dollfus, 1946:160-178, figs. 1-16, pls. 3-4. [Southern Ocean.]

Genus Pseudodicoptella Jeannet

PLIOCENE

Dicoptella (Pseudodicoptella) Jeannet in Lambert and Jeannet, 1935:44. Type-species: D. (P.) reicheli Jeannet in Lambert and Jeannet, 1935:44-45, figs. 54-55, pl. 1: fig. 22, pl. 4: figs. 11-13. [Dutch East Indies.]

Genus Salmaciella Mortensen

RECENT

Salmaciella Mortensen, 1942:226. Type-species: Salmacis dussumieri L. Agassiz. [Western-Indo-Pacific.]

Genus Salmacis L. Agassiz

RECENT

- S. belli Döderlein var. unicolor Mortensen, 1942: 226. [Coast of Queensland, Australia.]
- S. roseoviridis Koehler, 1927:84-88, pl. 12: figs. 3-6, pl. 26: fig. 3. [Indian Ocean.]
- S. rubricincta H. L. Clark, 1925a:86–87, pl. 5: figs. 3–4. [Saya de Malha, Indian Ocean.]
- S. sphaeroides (Linnaeus) var. variegata Mortensen, 1942:226. [Malaysia, off Jolo; Amboina Islands.]

PLIOCENE

S. nuda Currie, 1930:174, pl. 16: fig. 3. [Mombasa Island, East Africa.]

Genus Tatechinus Philip

UPPER EOCENE

Tatechinus Philip, 1969:268–269. Type-species: T. nudus Philip, 1969: 269-271, figs. 8a–f, 8i, pl. 4: figs. 7–9, 14–15, pl. 14: fig. 7, pl. 15: fig. 4. [Southeastern Australia.] (Tortachilla Ls.)

Genus Temnotrema A. Agassiz

RECENT

- T. notium H. L. Clark, 1938:387–388, pl. 26: fig. 5. [Western Australia.]
- T. pallescens H. L. Clark, 1925a:90-91, pl. 7: figs. 5-6. [Billiton Island, Indonesia, in Java Sea.]
- T phoenissa H. L. Clark, 1926:188-191, fig. 1. [Great Barrier Reef, Australia.]
- T siamense (Mortensen) var. megaloplax Mortensen, 1942:227. [Indo-Pacific, off Misol, Indonesia.]
- T. siamense (Mortensen) var. rubicundum Mortensen, 1942:227. [Mauritius, east of Madagascar, in Indian Ocean.]

Genus Dicoptella Lambert

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U425) consider *Dicoptella* a synonym of *Temnotrema* A. Agassiz.

MIOCENE

- D. agassizi Lambert and Thiéry var. elevata Jeannet in Lambert and Jeannet, 1935:38, figs. 37-39, pl. 2: fig. 6, pl. 4: fig. 7. [Java, Indonesia.]
- D. agassizi Lambert and Thiéry var. tenuis Jeannet in Lambert and Jeannet, 1935:37-38, figs. 30-36, pl. 2: figs. 1-3, pl. 4: fig. 5. [Java, Indonesia.]
- D. javana Jeannet in Lambert and Jeannet, 1935: 40-41, figs. 45-47, pl. 2: figs. 16-18. [Java, Indonesia.]
- D. leupoldi Jeannet in Lambert and Jeannet, 1935: 38, fig. 40, pl. 2: figs. 7–9, pl. 4: fig. 8. [Java, Indonesia.]

D. tobleri Jeannet in Lambert and Jeannet, 1935: 39-40, figs. 41-44, pl. 2: figs. 10-15, pl. 4: figs. 6, 14. [Java, Indonesia.]

UPPER MIOCENE

D. promensis Currie, 1939:221-226, figs. 1-5, pl. 14: figs. 6a-c. [Burma, Southeast Asia.] (Pegu Stage.)

PALEOCENE

D. desioi Airaghi, 1934:65, pl. 5: fig. 2. [Libya, North Africa.]

Subgenus Dicoptella (Paradicoptella) Jeannet

In the *Treatise*, Fell and Pawson (Durham et al., 1966:U425) consider *Paradicoptella* Jeannet a synonym of *Temnotrema* A. Agassiz.

MIOCENE

Dicoptella (Paradicoptella) Jeannet in Lambert and Jeannet, 1935:42. Type-species: D. (P.) rutteni Jeannet in Lambert and Jeannet, 1935: 42–44, figs. 51–53, pl. 4: fig. 16. [Java, Indonesia.]

Genus Trigonocidaris A. Agassiz

RECENT

- T. indica Mortensen, 1942:229. [Madagascar, Indian Ocean.]
- T. micropora Mortensen, 1942:229. [Malaysia.]
- T. radiata Mortensen, 1942:228. [Kei Islands, Malaysia.]
- T. versicolor Koehler, 1927:94–97, pl. 14: figs. 3–4, 6–10, 13, pl. 27: fig. 1. [Indian Ocean.]

Genus Triplacidia Bittner

LOWER OLIGOCENE/UPPER EOCENE

T. fraasi Loriol var. boncevi Gočev, 1928:40, 48, fig. 2. [Bulgaria.]

EOCENE

T. hungarica Vogl, 1921:128. [Hungary.]

MIDDLE EOCENE

T. trakyensis Pinar, 1951:37-38, figs. 1-2, 4, 7, 9, pl. 1b: figs. 2-3. [Turkey.] (Auversian. Lutetian.)

Genus Zeuglopleurus Gregory

UPPER CRETACEOUS

Echinocyphus (Zeugopleurus) glanoviensis Kongiel, 1939:24–25, pl. 2: fig. 29, pl. 3: figs. 1–3. [Poland.] (Lower Turonian.)

Family TOXOPNEUSTIDAE Troschel

Genus Cyrtechinus Mortensen

RECENT

Cyrtechinus Mortensen, 1942:229. Type-species: Psammechinus verruculatus Lütken. [Tropical Western-Indo Pacific.]

Genus Gymnechinus Mortensen

RECENT

- G. abnormalis H. L. Clark, 1925a:128-129, pl. 7: figs. 3-4. [Carcajos Carodos?]
- G. pallidus Koehler, 1927:113–118, pl. 17: figs. 5, 13, 15, pl. 18: figs. 1–6, pl. 19: figs. 2–3, pl. 27: fig. 4. [Ceylon.]

Genus Lytechinus A. Agassiz

RECENT

- L. thieryi Koehler, 1927:104–108, pl. 18: figs. 7–8, pl. 19, fig. 4, pl. 27: fig. 6. [Ceylon.]
- L. variegatus (Leske) var. pallida H. L. Clark, 1925a:121. [Cape Verde Islands, Atlantic Ocean.]
- L. williamsi Chesher, 1968b:3-5, figs. 1-2, 3a, 3c-i, 4-5, table 1. [Buena Ventura, Panama (Atlantic).]

UPPER MIOCENE/?PLEISTOCENE

L. variegatus (Leske) plurituberculatus Kier, 1963: 15–19, figs. 8–11, pl. 2: figs. 1–2, pl. 3: fig. 1, pl. 4: fig. 4. [Florida, U.S.A.] (Caloosahatchee and Tamiami Fm.)

PLIOCENE

- L. crassus H. L. Clark, 1945:317-318, pl. 41: figs. H-I. [Fiji, South Pacific Ocean.]
- L. okinawa Cooke, 1954:46, pl. 9: figs. 3-5. [Okinawa, Japan.] (Naha Ls. in lower part of Ryukyu Ls.)

LOWER MIOCENE

- L. coreyi Grant and Hertlein, 1938b:24, pl. 20: fig. 7. [California, U.S.A.] (Vasqueros.)
- L. (?) milleri Grant and Hertlein, 1938b: 24-25, pl. 15: figs. 1-2. [California, U.S.A.] (Vaqueros.)

Genus Mirechinus Nisiyama

UPPER EOCENE

Mirechinus Nisiyama, 1966:239-240. Type-species: M. mirabilis Nisiyama, 1966:240-242, pl. 6: fig. 3, pl. 7: figs. 2,4. [Bonin Islands, Japan, West Pacific Ocean.] (Lutetian.)

Genus Nudechinus Clark

RECENT

- N. ambonensis Mortensen, 1942:230. [Molucca Sea, Malaysia.]
- N. ambonensis Mortensen var. purpurascens Mortensen, 1942:230. [Amboina, Malaysia.]
- N. rubripunctatus H. L. Clark, 1925a:127-128, pl. 7: figs. 1-2. [Amirante Islands, Indian Ocean.]
- N. scotiopremnus H. L. Clark var. australiensis Mortensen, 1942:230. [Western Australia.]

Genus Pseudocentrotus Mortensen

MIOCENE

P. stenoporus Nisiyama, 1966:247-249, pl. 7: figs. 3-7. [Japan.] (Shirahama Fm.)

Genus Schizechinus Pomel

PLIOCENE

S. candeli Lambert, 1931c:44-45, pl. 7: figs. 2-4. [North Africa.]

Genus Scoliechinus Arnold and Clark

EOCENE

Scoliechinus Arnold and H. L. Clark, 1927:23. Type-species: S. axiologus Arnold and H. L. Clark, 1927:23-24, pl. 2: figs. 7-8. [Jamaica, West Indies.]

Genus Sphaerechinus Desor

Lower Miocene

Spherechinus [sic] burdigalensis Lambert, 1928b:90, fig. 2. [France.] (Upper Aquitanian.)

Genus Tripneustes L. Agassiz

MIDDLE MIOCENE

- T. tobleri Jeannet, 1928a:17-19, fig. 2, pl. 2: figs.1-3, pl. 6: figs. 4-6; 1928b:220. [Venezuela.](Couches d'Ojo de Aqua.)
- T. ventricosus (Lamarck) austriacus Tauber, 1951: 312-313, figs. 1-4. [Austria.] (Tortonian.)

LOWER MIOCENE

T. magnificus Nisiyama, 1966:243-245, pl. 6: figs. 2, 7, 9, pl. 7: fig. 1. [Mariana Island, West Pacific Ocean.] (Laulau Fm.)

Family Uncertain

Genus Gagaria Duncan

UPPER OLIGOCENE

- Thylechinus (Gagaria) chickasawhay Cooke, 1941a: 14, pl. 2: figs. 17a-d. [U.S.A.]
- T. (G.) mossomi Cooke, 1941a:13-14, pl. 1: figs. 6-9, pl. 2: fig. 16, pl. 3: figs. 6-9, pl. 4: figs. 3-5. [U.S.A.]

MIDDLE EOCENE

G. foutatoroensis Roman in Élouard and Roman, 1966:840-843, fig. 2, pl. 19. [Senegal, West Africa.] (Lower Lutetian.)

LOWER EOCENE

T. (G.) salis Cooke, 1941a:13, pl. 2: figs. 12-14. [U.S.A.]

Order ECHINOIDA Claus

Family ECHINIDAE Gray

Genus Echinus Linné

RECENT

- E. atlanticus Mortensen var. helenae Mortensen, 1942:230. [St. Helena Island, west coast of Africa, tropical Atlantic Ocean.]
- E. multidentatus H. L. Clark, 1925a:115-116, pl. 6: figs. 1-2. [Challenger Sta. 170, near the Kermadec Islands, Pacific Ocean.]
- E. stenoporus Mortensen, 1942:230. [South Africa.]

Genus Dermechinus Mortensen

RECENT

Dermechinus Mortensen, 1942:231. Type-species: Echinus horridus A. Agassiz. [Indo-Pacific.]

Genus Gracilechinus Fell and Pawson

RECENT/PLIOCENE

Gracilechinus Fell and Pawson in Durham et al., 1966:U431, fig. 322(1a). [England; Atlantic-Mediterranean-IndoPacific.] Type-species: Echinus gracilis A. Agassiz.

Genus Paracentrotus Mortensen

RECENT

P. grandis H. L. Clark, 1923:388, pl. 22: figs. 1-3. [South Africa.]

Genus Polyechinus Mortensen

RECENT

Polyechinus Mortensen, 1942:231. Type-species: Paracentrotus agulhensis Döderlein. [South Africa.]

Genus Psammechinus L. Agassiz and Desor

PLIOCENE

P. punicus Lambert, 1931c:103, pl. 4: figs. 10-12. [Tunis, North Africa.]

MIOCENE

P. dainellii Desio, 1929:299-301, pl. 39: figs. 2a-d. [Oasis of Giarabùb, east Cyrenaica, Libya.]

MIDDLE MIOCENE

P. neuvillei Lambert, 1928b:88. [France. Also described and figured in Lambert, 1928e:8, pl. 5: figs. 15–18. (Helvetian.)]

PALEOCENE

P. desioi Airaghi, 1934:64-65, pl. 5: fig. 1. [Libya, North Africa.]

OLIGOCENE

P. arnei Castex, 1947:30-31, pl. 1: fig. 5. [France.] (Lattorfian-Sannoisian.)

UPPER OLIGOCENE

P. floralanus Cooke, 1941a:15–16, pl. 3: figs. 10–11. [U.S.A.]

UPPER EOCENE

P.? ocalanus Cooke, 1941a:16, pl. 2, figs. 9–11. [U.S.A.]

MEDIAL EOCENE

P. santee Cooke, 1941a:15, pl. 2: figs. 7-8. [U.S.A.] (McBean Fm.)

Lower Cretaceous

- P. demolyi Lambert in Démoly, 1928:146, fig. [France.]
- P. simplex Lambert, 1931c:66, pl. 3: figs. 6-7. [Algiers, North Africa.] (Aptian.)

Genus Sterechinus Koehler

RECENT

- S. dentifer Koehler, 1926:34–36, pl. 104: figs. 1–4, pl. 120: fig. 1. [Antarctic.]
- S. neumayeri (Meissner) var. nigroalba Mortensen, 1942:231. [Antarctic.]

Genus Stirechinus Desor

MIOCENE

S. minor Cotteau var. couffoni Cottreau, 1933: 542–543, pl. 26: figs. 5–6a. [France.]

Family ECHINOMETRIDAE Gray

Genus Echinometra Gray

MIOCENE

E. hondoana Nisiyama, 1966:270-271, pl. 10: fig. 1. [Japan.] (Kozai Fm.)

Genus Ellipsechinus Lütken

CRETACEOUS

Ellipsechinus palmeri Lambert in Sánchez Roig, 1949:46–47, pl. 2: figs. 5–6. [Cuba. Although Sánchez Roig thinks it is possibly Pleistocene, Brodermann (1949:322) maintains it is Cretaceous.]

Genus Echinostrephus A. Agassiz

RECENT

E. formosus Mortensen, 1940a:50; 1943b:306, pl. 35: figs. 11-14. [Malaysia.]

MIOCENE

E. saipanicum Cooke, 1957:362, pl. 119: figs. 4-6. [Mariana Islands, West Pacific Ocean.]

Genus Evechinus Verrill

PLIOCENE/MIOCENE

E. palatus Philip, 1969:234–235, pl. 16: figs. 1-6. [Southeast Australia.] (Cheltenhamian.)

Genus Heliocidaris L. Agassiz and Desor

RECENT

H. erythrogramma (Valenciennes) var. parvispina H. L. Clark, 1938:404. [Southwest Australia.]

MIOCENE

H. ludbrookae Philip, 1965:192-194, fig. 4c, pl. 27: figs. 1-4, pl. 28: figs. 1-2. [Southeast Australia.]

Genus Zenocentrotus A. H. Clark

RECENT

- Zenocentrotus A. H. Clark, 1932:5-7. Type-species: Z. kellersi A. H. Clark, 1932:7-10, pls. 1-3, pl. 4: fig. 1, pl. 5: fig. 1, pl. 6: fig. 3. [Niuafoou Island (between Samoa and Fiji), South Pacific Ocean.]
- Z. paradoxus A. H. Clark, 1932:10, pl. 5: fig. 2, pl. 6: figs. 1-2, pl. 7: figs. 1-2. [Niuafoou Island, South Pacific Ocean.]

MIOCENE

Z. peregrinus Philip, 1965:194-195, fig. 4b, pl. 28: figs. 3-6, pl. 29: figs. 6, 9. [Southeast Australia.]

Family STRONGYLOCENTROTIDAE Gregory

Genus Strongylocentrotus Brandt

RECENT

- S. djakonovi Baranova, 1957:223–225, figs. 14a–i. [Bering Sea.]
- S. intermedius Agassiz f. longispina Djakonov, 1938: 474–475, 497. [Japan Sea.]
- S. polyacanthus Agassiz and Clark apicimagis Baranova, 1957:221–223, figs. 13a-e. [Bering Sea.]

PLIOCENE

S. magistrus Nisiyama, 1966:255-256, pl. 8: figs. 1-3. [Japan.] (Himi Fm.)

LOWER PLIOCENE/MIOCENE

S.? octoporus Nisiyama, 1966:256-258, pl. 8: figs. 7-8. [Japan.]

MIOCENE

- S. antiquus Philip, 1965:189–191, figs. 3a-b, 4a, 4d, pl. 29: figs. 1–3. [Southeast Australia.]
- S. minihagali Deraniyagala, 1961:154, pl. 5: fig. 10. [Ceylon, Indian Ocean.]

Genus Allocentrotus Mortensen

RECENT

Allocentrotus Mortensen, 1942:232. Type-species: Strongylocentrotus fragilis Jackson. [Vancouver, Canada, to Lower California, U.S.A.]

LOWER PLIOCENE

A. japonicus Nisiyama, 1966:258-260, pl. 8: figs.
4, 10-14, pl. 9: figs. 1-2, 4-6. [Japan.] (Kurotaki Fm.)

Genus Hemicentrotus Mortensen

RECENT

Hemicentrotus Mortensen, 1942:231. Type-species: Sphaerechinus pulcherrimus A. Agassiz. [Japan-North China.]

Family PARASALENIIDAE Mortensen

Genus Parasalenia A. Agassiz

RECENT

P. gratiosa A. Agassiz var. boninensis Mortensen, 1930:388, pl. 1: figs. 2-5. [North Pacific Ocean.]

MIOCENE

P. marianae Cooke, 1957:361-362, pl. 119: figs. 1-3. [Mariana Islands, West Pacific Ocean.]

Genus Diplosalenia Mortensen

EOCENE

Diplosalenia Mortensen, 1942:232. Type-species: Parasalenia gosseleti Cotteau. [France.]

Superorder Uncertain (ECHINACEA or DIADEMATACEA)

Order ORTHOPSIDA Mortensen

Family ORTHOPSIDAE Duncan

Genus Orthopsis Cotteau

UPPER CRETACEOUS

- O. casanovai Cooke, 1955:92-93, pl. 20: figs. 1-3. [Texas, U.S.A.] (Campanian.)
- O. sanfilippoi Checchia-Rispoli, 1933b:6-11, figs. 2-4, pl. 1: figs. 5-15. [North Africa.] (Maestrichtian.)

LOWER CRETACEOUS

- O. aguilerai Maldonado-Koerdell, 1953:28-29, pl. 1: figs. 25-27. [Mexico.] (Aptian.)
- O. bahiaensis Brito, 1964:6-7, pl. 1: figs. 2-3, pl. 2: figs. 1-2. [Brazil.] (Albian.)
- O. comalensis Whitney and Kellum, 1966:250-253, pl. 1: figs. 13-15. [Texas, U.S.A.] (Trinity Group. Aptian.)
- O. royoi Lambert, 1935f:523, pl. 58: figs. 3-5. [Spain.] (Aptian.)
- O. titicacana Cooke, 1949b:84-85, pl. 22: figs. 1-5. [Peru.] (Aptian/Albian?)

UPPER JURASSIC

O. pomeraniae Kongiel, 1957:30-32, 53-55, 70-72, pl. 5: figs. 5-6. [Pomerania, on the Baltic Sea.] (Upper Kimmeridgian.)

Genus Dubarechinus Lambert

Dubarechinus Lambert, 1937:62-63. Type-species: D. despujolsi Lambert, 1937:63, pl. 4: figs. 14-17. [Morocco.] (Upper Domerian.)

D. termieri Lambert, 1937:63-64, pl. 4: fig. 18. [Morocco.] (Upper Domerian.)

Doubtful Genera of Regular Echinoids

Genus Besairiecidaris Lambert

MIDDLE JURASSIC

Besairiecidaris Lambert, 1936b:117-118. Typespecies: B. ankarensis Lambert, 1936b:118, pl. 6: figs. 11-12. [Madagascar, off East Africa.] (Bajocian.)

Genus Bramus de Gregorio

PERMIAN

Cidaris (Bramus) de Gregorio, 1930a:34. Typespecies: C. (B.) simplex de Gregorio, 1930a: 34, pl. 12: figs. 13-14. [Italy.]

C. (B.) pirillus de Gregorio, 1930a:34, pl. 12: figs. 15-17. [Italy.]

Genus Crinocidaris de Gregorio

TRIASSIC

Cidaris (Crinocidaris) de Gregorio, 1930b:29. Typespecies: Crinocidaris unicus de Gregorio, 1930b: 29, pl. 6: figs. 29–31. [Italy. Fell and Pawson (Durham et al., 1966:U439) place it under "doubtful genera of regular echinoids."]

Genus Firmacidaris Lambert

LOWER JURASSIC

Firmacidaris Lambert, 1937:45-46. Type-species: Spherotiaris precincta Lambert. [Morocco.] (Domerian.)

UPPER JURASSIC

F. neumayri Nisiyama, 1966:168, pl. 30: figs. 1-2. [Japan.] (Probably Callovian to Tithonian.)

Genus Protocidaris de Gregorio

PERMIAN

Cidaris (Protocidaris) de Gregorio, 1930a:34. Typespecies: C. (P.) bencontestus de Gregorio, 1930a: 34, pl. 12: figs. 20-21. [Italy.]

Genus Radiolus (auctt.)

TRIASSIC

R. adametzi Jekelius, 1932:49-50, pl. 2: figs. 50a-b, 51a-b. [Rumania.]

R. alutensis Jekelius, 1932:49, pl. 2: fig. 46. [Rumania.]

R. antipai Jekelius, 1932:50-51, pl. 2: fig. 48. [Rumania.]

R. boletus Bather, 1929:239-241, pl. 258: figs. 36a-38. [Timor Island, Indonesia.]

R. culter Bather, 1929:241-243, pl. 258: figs. 39a-41b. [Timor Island, Indonesia.]

R. festuca Bather, 1929:244-245, pl. 258: figs. 46-48b. [Timor Island, Indonesia.]

R. fusus Bather, 1929:245-246, pl. 258: fig. 49. [Timor Island, Indonesia.]

R. herbichi Jekelius, 1932:50, pl. 2: fig. 45. [Rumania.]

R. racadaui Jekelius, 1932:49, pl. 2: figs. 47a-c. [Rumania.]

R. rostratus Körner, 1937:163-164, pl. 11: figs. 1a-c. [Peru.]

R. segmentatus Bather, 1929:236-238, pl. 258: figs. 27-29b. [Timor Island, Indonesia.]

UPPER TRIASSIC

R. funginus Wanner, Knipscheer and Schenk, 1952:68-69, pl. 3: figs. 1-4. [Indonesia.]

Genus Vernius de Gregorio

PERMIAN

Cidaris (Vernius) de Gregorio, 1930a:34. Typespecies: C. (V.) elaboratus de Gregorio, 1930a:34, pl. 12: figs. 18-19. [Italy.]

Superorder GNATHOSTOMATA Zittel

Order HOLECTYPOIDA Duncan

Suborder HOLECTYPINA Duncan

Family HOLECTYPIDAE Lambert

Genus Holectypus Desor

CRETACEOUS

- H. bullardi Ikins, 1940:73-74, pl. 6: figs. 2a-c. [Texas, U.S.A.]
- H. hondoensis Cannon in Ikins, 1940:74, pl. 6: figs. 3a-c. [Texas, U.S.A.]

UPPER CRETACEOUS

- H. boschmai Engel, 1964a:235-236, pl. 14. [Southern Netherlands.] (Senonian.)
- H. decoratus Sánchez Roig, 1949:56, pl. 1: figs. 6-7. [Cuba.]
- H. khamirensis Clegg, 1933:6-7, fig. 1, pl. 1: figs. la-c. [Persia (Iran).]
- H. larteti Cotteau var. major Blanckenhorn, 1925 [1924]:91-92, pl. 7: figs. 12a-d. [Palestine, Israel.] (Cenomanian.)
- H. montalvensis Sánchez Roig, 1953c: 138, pl. 1: figs. 2-3. [Cuba.]
- H. parvus Jones, 1938:133, pl. 13: figs. 1, 9-10. [Mexico.] (Indidura Fm.)
- H. subpentagonalis Blanckenhorn, 1925 [1924]: 92-93, pl. 7: fig. 13. [Palestine, Israel.] (Upper Cenomanian.)

LOWER CRETACEOUS

- H. adkinsi Smiser, 1936:461, pl. 62: figs. 12–15. [Texas, U.S.A.] (Comanchean.)
- H. almeidae Rey, 1966:295-300, figs. 1-2, pl. 1: figs. 1-9. [Portugal.] (Hauterivian.)
- H. engerrandi Lambert, 1927a:269. [Texas, U.S.A.] (Comanche Series.)
- H. ovatus Whitney and Kellum, 1966:259-260, pl.2: figs. 10-12. [Texas, U.S.A.] (Trinity Group. Aptian.)

MIDDLE JURASSIC

H. leuthardti Lambert, 1926b:118-122, pl. 10: figs. 1-2. [Switzerland.]

LOWER JURASSIC

H. hians Lambert, 1933b:55-56, pl. 1: fig. 10. [North Africa.] (Lower Domerian.)

Genus Coenholectypus Pomel

UPPER CRETACEOUS

Holcctypus (Caenholectypus?) macrostomus Engel, 1964a:236-239, figs. 1-2. [Southern Netherlands.] (Senonian.)

LOWER CRETACEOUS

- H. (C.) nanus Cooke, 1955:96, pl. 27: figs. 13-19. [Texas, U.S.A.] (Upper Albian.)
- H. (Coenholectypus) peridoneus Nisiyama, 1950b: 32-33, pl. 4: figs. 5-7. [Japan.] (Aptian/Albian.)
- H. (C.) planatus Roemer aponensis Cooke, 1961:6, pl. 2: figs. 4-5. [Venezuela.] (Middle Albian to Vraconian.)

Family ANORTHOPYGIDAE Wagner and Durham

Genus Anorthopygus Cotteau

UPPER CRETACEOUS

- A. paradoxus Hawkins, 1935a:51-53, figs. 5-7, pl.7: figs. 1a-c. [Somaliland, East Africa.] (Upper Senonian.)
- A. riveroi Sánchez Roig, 1949:55-56, pl. 5: figs. 1-2. [Cuba.]

LOWER CRETACEOUS

A. texanus Cooke, 1946:219-220, pl. 34: figs. 9-12. [U.S.A.] (Washita Group.)

Family DISCOIDIDAE Lambert

Genus Discoides Parkinson

UPPER CRETACEOUS

- D. dubertreti Keller and Vautrin, 1937:148–150, fig. 47a, pl. 5: figs. 10–12. [Syria.] (Cenomanian.)
- D. menchikoffi Lambert, 1937:76–77, pl. 1: figs. 19–22. [Morocco.] (Campanian.)
- D. neglectus Lambert, 1931c:96, pl. 3: fig. 35. [Tunis, North Africa.] (Santonian.)
- D. philocrania Lambert, 1933a:16, pl. 2: figs. 8-10. [Madagascar, off East Africa.] (Upper Senonian.)

LOWER CRETACEOUS

D. rahbergensis Jeannet, 1933b:370; 1933c:233, 1934d:4-5, pl. 1: figs. 10-18. [Austria.] (Hauterivian/Neocomian.)

Genus Discoidea Agassiz

UPPER CRETACEOUS

D.? dendroides Blanckenhorn, 1925 [1924]:93, pl. 7: fig. 14. [Palestine, Israel.] (Upper Cenomanian.)
D. minima Agassiz var. inferior Maczyńska, 1958: 97-98, 113-114, figs. 26a-b, 27, pl. 9: figs. 1-14. [Poland.] (Upper Turonian.)

LOWER CRETACEOUS

D. karakaschi Renngarten, 1926:91–93, 111–112,
 pl. 8: figs. 10–11, pl. 9: figs. 9–10. [Southern Russia.] (Upper Hauterivian to Lower Barremian.)

Genus Camerogalerus Quenstedt

UPPER CRETACEOUS

C. bucaillei Lambert and Jeannet, 1928b:138. [France.] (Cenomanian.)

Genus Dixonia Wagner and Durham

Upper Cretaceous

Dixonia Wagner and Durham, 1964:170. Typespecies: Discoidea dixoni Forbes in Dixon. [Europe.] (Aptian-Turonian.)

Genus Lanieria Duncan

UPPER CRETACEOUS

L. uvaldana Cooke, 1953:10, pl. 3: figs. 1-3. [Texas, U.S.A.] (Campanian.)

Suborder ECHINONEINA H. L. Clark

Family ECHINONEIDAE Agassiz and Desor

Genus Echinoneus Leske

RECENT

E. abruptus H. L. Clark, 1925a:177, pl. 10: figs. 1-3. [Zanzibar, East Africa.]

PLIOCENE

E. burgeri Grant and Hertlein, 1938b:104–105, pl. 22: figs. 1–3, 6, pl. 23: figs. 6–7. [California, U.S.A.]

OLIGOCENE

E. sanchezi Lambert, 1928c:21, figs. 1-2. [Cuba.]

UPPER OLIGOCENE

- E. robustus Sánchez Roig, 1953c:140-141, pl. 3: figs. 1-2. [Cuba.]
- E. rojasi Sánchez Roig, 1952c:5-6, pl. 3: figs. 4-5. [Cuba.]
- E. tenuipetalum Sánchez Roig, 1952c:5, pl. 1: fig.5. [Cuba.]

Genus Duperieria Roman

MIDDLE EOCENE

Duperieria Roman, 1968a (Abstract):103; 1968b: 120. [Biarritz (Basses-Pyrenées), southwest France.] (Lutetian.)

Genus Paleoechinoneus Grant and Hertlein

UPPER CRETACEOUS

Paleoechinoneus Grant and Hertlein, 1938b:105. Type-species: P. hannai Grant and Hertlein, 1938b:105–106, pl. 23: figs. 4–5. [Mexico.]

Family CONULIDAE Lambert

Genus Conulus Leske

CRETACEOUS

C. mullerriedi Lambert, 1935c:368, fig. 1. [Mexico.] C. praenuntius Carter 1928:58. [Lincolnshire, England.] (Upper to middle Chalk, T.g. zone.)

UPPER CRETACEOUS

- C. campaniformis Melikov and Endel'man, 1963: 136-138, figs. 1-2. [North Caucasus, U.S.S.R.] (Lower Maestrichtian.)
- C. castaneus (Brongniart) var. plana Popiel-Barczyk, 1958:61–62, 77–78, fig. 13, pl. 4: fig. 7, pl. 5: figs. 5–12. [Poland.] (Lower Turonian.)
- C. castaneus (Brongniart) var. rhotomagensis Agassiz in Popiel-Barczyk, 1958: 59-61, 77, fig. 12, pl. 4: figs. 9-10, pl. 5: figs. 1-4. [Poland.] (Lower Turonian.)
- C. chiapasensis Lambert, 1936e:3-4, pl. 1: figs. 5-6. [Mexico.] (Senonian (Campanian).)
- C. chiesai Airaghi, 1939:256–257, pl. 11: figs. 1–2. [North Africa.] (Maestrichtian.)
- C. cubensis Sánchez Roig, 1949:58-59. [Cuba.]
- C. ellipticus (Zareczny) var. rostrata Popiel-Barczyk, 1958:58, 77, pl. 4: figs. 1-4. [Poland.] (Lower Turonian.)
- C. matesovi Moskvin, 1959:251, pl. 3: figs. 2a-c. [Caucasus, U.S.S.R.]
- C. parravanoi Checchia-Rispoli, 1932c:383-386, pl. 1: figs. 1a-b, pl. 2: fig. 4. [North Africa.] (Maestrichtian.)
- C. rhotomagensis Agassiz var. elevatus Chiriac, 1957: 66-68, pl. 2: figs. 2a-c, 3a-c. [Cuza Voda, Pestera, Roumania.] (Turonian.)
- C. sanfilippoi Checchia-Rispoli, 1930a:79-82, pl.
 8: figs. 1-6. [Tripolitania, North Africa.] (Maestrichtian.)
- C. stephensoni Cooke, 1953:11, pl. 3: figs. 8-13. [Texas, U.S.A.] (Santonian.)
- C. subtrotundus (Mantell) var. conoidea Popiel-Barczyk, 1958:53-55, 76, fig. 8, pl. 2: figs. 5-8. [Poland.] (Lower Turonian.)
- C. subrotundus (Mantell) var. subglobosa Popiel-Barczyk, 1958:52–53, 75, fig. 7, pl. 2: figs. 1–4. [Poland.] (Lower Turonian.)

- C. tradis Lees, 1928:659-661, fig. 12, pl. 46: figs. 1a-b. [Arabia.] (Senonian (Campanian).)
- C. zinai Airaghi, 1939:256, pl. 10: fig. 9. [North Africa.] (Maestrichtian.)

Lower Cretaceous

C. grauensis Currie, 1943:23-25, figs. 4-7, pl. 3: figs. 1-6. [Ethiopia, Northeast Africa.] (Aptian.)

Genus Pyrina Desmoulins

Cretaceous

P. barthouxi Lambert, 1931d:192–193, pl. 5: fig. 45. [Egypt.] (Vraconian.)

UPPER CRETACEOUS

- P. arabica Clegg, 1933:8, pl. 1: figs. 2a-c. [Arabia.]
 P. avilensis Sánchez Roig, 1949:60-61, pl. 42: figs. 9-10. [Cuba.]
- P. mexicana Lambert, 1936e:4-5, pl. 1: fig. 1. [Mexico.] (Upper Senonian.)
- P. mortenseni Checchia-Rispoli, 1932c:389-391, pl.
 2: figs. 1-3, pl. 3: figs. 1-2c. [North Africa.]
 (Maestrichtian.)
- P. ovalis d'Orbigny plana Maczyńska, 1962:163–166,
 181, figs. 9–12, pl. 5: figs. 1–28. [Poland.] (Cenomanian.)
- P. parahybensis Maury, 1930:116-119, pl. 5: fig. 1. [Brazil.] (Campanian.)

Lower Cretaceous

- P. hancockensis Whitney and Kellum, 1966:260-261, pl. 2: figs. 1-3. [Texas, U.S.A.] (Trinity Group. (Aptian.)
- P whitneyae Ikins, 1940:74-75, pl. 6: figs. 4a-c. [Texas, U.S.A. Cooke (1946:221) placed this species in Globator.] (Comanchean.)

Genus Galeraster Cotteau

MIDDLE EOCENE

G. terkosensis Pinar, 1951:38-40, figs. 3, 5-6, pl.1b: fig. 1. [Turkey.] (Lutetian.)

Genus Globator Agassiz

PALEOCENE

G. ravni Nielsen, 1926:13-15, 22-23, figs. 6-7. [Denmark.] (Danian.)

UPPER CRETACEOUS

- G. dainellii Checchia-Rispoli, 1932c:391, pl. 1: figs. 2-2b, pl. 2: figs. 5-5c. [North Africa.] (Maestrichtian.)
- G. depsangensis Stefanini, 1928:175-176, pl. 20: figs. 9a-d. [Karakorum, Mongolia.] (Senonian.)
- G. vaughani Cooke, 1953:12, pl. 4: figs. 1-4. [Texas, U.S.A.] (Campanian.)

Genus Pseudopyrina Lambert

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U445) consider *Pseudopyrina* Lambert a subjective synonym of *Globator* Agassiz.

PALEOCENE

- P. subcircularis Ravn, 1927:321-322, fig. 2, pl. 1: figs. 5a-c, 6a-c. [Denmark.] (Danian.)
- P. subovalis Ravn, 1927:319-321, fig. 1, pl. 1: figs. 4a-d. [Denmark.] (Danian.)

UPPER CRETACEOUS

- P. darderi Lambert, 1935b:362, pl. 41: figs. 5-6. [Spain.] (Upper Campanian.)
- P. hourcqi Lambert, 1936c:24, pl. 2: figs. 11-12. [Madagascar, off East Africa.] (Upper Campanian.)
- P. minuta Smiser, 1935b:42-43, pl. 4: figs. 3a-e. [Belgium.] (Maestrichtian.)

LOWER CRETACEOUS

P. orchoterenai Lambert, 1935d:370, pl. 16: figs. 15-17. [Mexico.] (Barremian.)

Genus Pygopyrina Pomel

UPPER CRETACEOUS

P. pusilla Stefanini, 1928:173-175, pl. 20: figs. 8a-e. [Karakorum, Mongolia.] (Cenomanian.)

Family GALERITIDAE Gray

Genus Echinoconus d'Orbigny

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U47) consider *Echinoconus* a synonym of *Galerites* Lamarck.

Upper Cretaceous

E. djiddensis Charles in Lambert and Charles, 1937:378-379, pl. 8: figs. 1-3. [Asia Minor.]

Family Uncertain

Genus Cluniaster Jeannet

Lower Cretaceous

Cluniaster Jeannet, 1933b:370; 1933c:233; 1934d:6. Type-species: C. rhenanus Jeannet, 1933b:370; 1933c:233; 1934d:6, fig. 2, pl. 1: figs. 3-6. [Austria.] (Hauterivian.)

Suborder CONOCLYPINA Haeckel

Family CONOCLYPIDAE Zittel

Genus Conoclypus Agassiz

MIDDLE MIOCENE

C. westraliensis Crespin, 1944:75-76, pl. 1: figs. 1-3. [Australia.]

EOCENE

- C. boncevi Gočev, 1933:46-47, pl. 3: figs. 6a-b. [Bulgaria. Gočev referred to Conoclypeus Gray (nom. nud.).]
- C. dallonii Lambert, 1933d:189-190, fig. 2. [Spain.]

MIDDLE EOCENE

C. besairiei Lambert, 1936a:207, pl. 24: figs. 10-11. [Madagascar, off East Africa. Lambert referred it to Conoclypeus Gray (nom. nud.).] (Lutetian.)

LOWER EOCENE

- C. gotshevi Sapundzhieva, 1964:30, 58-59, pl. 14: figs. 2a-c. [Bulgaria.] (Ypresian.)
- C. lamberti Villatte, 1966b:869-870, fig. 3, pl. 34: figs. 1, 4. [Spain.] (Ypresian.)
- C. pilgrimi Davies, 1926:359-363, pl. 25: figs. 1-6, pl. 26: figs. 1-2. [India. Davies referred it to Conoclypeus Gray (nom. nud.).] (Laki Series.)
- C. pinfoldi Gill, 1953:843-844, pl. 91: figs. 1-3. [Pakistan. Gill referred it to Conoclypeus Gray (nom. nud.).]
- C. warthi Davies, 1926:363-367, pl. 26: figs. 3-6. [India. Davies referred it to Conoclypeus Gray (nom. nud.).] (Laki Series.)

CRETACEOUS

C. sanctispiritensis Sánchez Roig, 1949:63, pl. 21: figs. 5-6. [Cuba. Roig referred it to Conoclypeus Gray (nom. nud.).]

Family OLIGOPYGIDAE Duncan

Genus Oligopygus de Loriol

EOCENE

- O. alvarezi Lambert and Roig in Sánchez Roig, 1926:82, pl. 11: figs. 3-5. [Cuba.]
- O. curasavica Molengraaff, 1929:77–83, pl. 27: figs. 1–5, pl. 28: figs. 1–5. [Curaçao, Dutch West Indies.]
- O. hypselus Arnold and H. L. Clark, 1927:28-29, pl. 4: figs. 6-8. [Jamaica.]
- O. jamaicensis Arnold and H. L. Clark, 1927:28-29, pl. 4: figs. 9-11. [Jamaica.]
- O. ovumserpentis (Guppy) var. baldryi Brighton, 1926b:360-366, figs. 1a-g, pl. 26: figs. e-h. [Peru.] (Atascadero Ls.)
- O. tuberculatus Sánchez Roig, 1951:56-57, pl. 34: figs. 4-5. [Cuba.]

UPPER EOCENE

- O. camagueyensis Sánchez Roig, 1949:162-163. [Cuba. Brodermann (1949:325) says it is Middle-Upper Eocene.]
- O. christi Jeannet, 1928a:10-11, pl. 1: figs. 16-19,

- pl. 6: fig. 2; 1928b: 220–221. [Venezuela, Trinité Island.] (Priabonian/Jacksonian.)
- O. circularis Sánchez Roig, 1949:159-160, pl. 29: figs. 2-3. [Cuba. Brodermann (1949:325) says it is Middle-Upper Eocene.]
- O. collignoni Lambert, 1931e:291, pl. 17: figs. 5-7. [Cuba. Although Sánchez Roig says it is Lower Oligocene, Brodermann (1949:325) places it in the Middle and Upper Eocene.]
- O. colsoni Lambert, 1931e:290-291, pl. 17: figs. 1-4. [Florida, U.S.A.]
- O. costuliformis Jeannet, 1928a:9-10, pl. 1: figs. 13-15; 1928b: 220-221. [Venezuela, Trinité Island.] (Priabonian/Jacksonian.)
- O. cubensis Lambert, 1931e:292. [Cuba. Although Sánchez Roig says it is Lower Oligocene, Brodermann (1949:325) places it in the Middle and Upper Eocene.]
- O. elongatus Palmer in Sánchez Roig, 1949:166-167, pl. 30: figs. 4-5. [Cuba. Brodermann (1949:325) says it is Middle to Upper Eocene.]
- O. floridanus Twitchell var. laevis Palmer in Sánchez Roig, 1949:166. [Cuba. Brodermann (1949: 325) says it is Middle to Upper Eocene.]
- O. herrerai Sánchez Roig, 1953c: 154-155, pl. 6: figs. 6-7, 9. [Cuba.]
- O. kugleri Jeannet, 1928a:6-7, pl. 1: figs. 1-7, pl.
 6: fig. 1; 1928b:220-221. [Venezuela, Trinité Island.] (Priabonian/Jacksonian.)
- O. mullerriedi Sánchez Roig, 1949:160–162, pl. 30: figs. 2–3. [Cuba. Brodermann (1949:325) says it is Middle to Upper Eocene.]
- O. nancei Cooke, 1941b:305-306, figs. 1-3. [Venezuela.] (Upper Santa Anita.)
- O. pinguis Palmer in Sánchez Roig, 1949:165, pl. 28: figs. 2-3. [Cuba. Brodermann (1949:325) says it is Middle to Upper Eocene.]
- O. putnami Israelsky, 1933a:275–276, pl. 18: figs. 1–4. [Mexico.]
- O. rotundus Cooke, 1942:9, pl. 2: figs. 1-3. [U.S.A.]
- O. sanchezi Lambert, 1931e:292, pl. 17: fig. 8. [Cuba. Although Sánchez Roig says it is Lower Oligocene, Brodermann (1949:325) places it in the Middle and Upper Eocene.]
- O. sanjosephi Sánchez Roig, 1953c:155-156, pl. 7: figs. 1-2. [Cuba.]
- O. zyndeli Jeannet, 1928a:7-8, pl. 1: figs. 8-9; 1928b:220-221. [Venezuela, Trinité Island.] (Priabonian/Jacksonian.)

Genus Bonaireaster Pijpers

UPPER EOCENE

Bonaireaster Pijpers, 1933:84–86. Type-species: B. rutteni Pijpers, 1933:84–86, pl. 1: figs. 1–6. [Dutch West Indies, Netherland Antilles, off Venezuelan coast.]

Genus Haimea Michelin

UPPER EOCENE

- H. camagueyana Sánchez Roig, 1949:122–123, pl. 50: figs. 6–7. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:322) says it is Middle to Upper Eocene.]
- H. globulosa Sánchez Roig, 1949:124. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:322) says it is Middle to Upper Eocene.]
- H. hernandezi Sánchez Roig, 1952c:11, pl. 6: fig. 5. [Cuba.]
- H. pusilla Sánchez Roig, 1949:123. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:322) says it is Middle to Upper Eocene.]
- H. truncata Sánchez Roig, 1949:124–125, pl. 50: figs. 8–9. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:322) says it is Middle to Upper Eocene.]

MIDDLE EOCENE

- H. cylindrica Sánchez Roig, 1953c:141, pl. 3: figs.6–7. [Cuba.]
- H. gigantea Sánchez Roig, 1953c:143, pl. 3: fig. 11. [Cuba.]
- H. pentagona Sánchez Roig, 1953c:142–143, pl. 3: figs. 8–9. [Cuba.]
- H. subcylindrica Sánchez Roig, 1953c:141-142, pl.3: figs. 4-5. [Cuba.]

Genus Pauropygus Arnold and Clark

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U448) consider *Pauropygus* a synonym of *Haimea* Michelin.

EOCENE

Pauropygus Arnold and H. L. Clark, 1927:30-32. Type-species: Echinolampas ovumserpentis Guppy. [Jamaica.]

PALEOGENE

P. clarki Lambert, 1931e:294, pl. 17: figs. 10-12. [Cuba.]

EOCENE

- P. altus Arnold and H. L. Clark, 1927:33, pl. 4: figs. 15-17. [Jamaica.]
- P. convexus Arnold and H. L. Clark, 1927:33-34, pl. 4: figs. 18-20. [Jamaica.]
- P. cylindricus Arnold and H. L. Clark, 1927:34-35, pl. 4: figs. 12-14. [Jamaica.]
- P. elevatus Arnold and H. L. Clark, 1927:35, pl. 5: figs. 1-3. [Jamaica.]
- P. latus Arnold and H. L. Clark, 1927:35-36, pl. 5: figs. 4-6. [Jamaica.]
- P. meunieri Lambert var. inflata Lambert in Lambert and Jacquet, 1936:351, pl. 23: figs. 9–10. [Senegal, West Africa.]
- P. meunieri Lambert var. latipetala Lambert in Lambert and Jacquet, 1936:351, pl. 23: fig. 11. [Senegal, West Africa.]
- P. meunieri Lambert var. sulcata Lambert in Lambert and Jacquet, 1936:351, pl. 23: fig. 12. [Senegal, West Africa.]
- P. parvipetalus Arnold and H. L. Clark, 1927: 38-39, pl. 5: figs. 13-15. [Jamaica.]
- P platypetalus Arnold and H. L. Clark, 1927:39, pl. 5: figs. 16-18. [Jamaica.]
- P. pyramidoides Arnold and H. L. Clark, 1927: 39-40, pl. 5: figs. 19-21. [Jamaica.]
- P. rotundus Arnold and H. L. Clark, 1927:40-41, pl. 6: figs. 1-3. [Jamaica.]
- P. rugosus Arnold and H. L. Clark, 1927:41, pl. 6: figs. 4-6. [Jamaica.]
- P. stenopetalus Arnold and H. L. Clark, 1927: 41-42, pl. 6: figs. 7-9. [Jamaica.]

UPPER EOCENE

P. stefaninii Lambert, 1931e:293-294, fig. 1, pl. 17: fig. 9. [Île Saint-Barthélemy, West Indies.]

Suborder Uncertain

Family Uncertain

Genus Amblypygus L. Agassiz

OLIGOCENE

A. checchiai Socin, 1942:52-53. [Somaliland, East Africa.]

UPPER EOCENE

A. douvillei Lambert in Sánchez Roig, 1949: 126-127, pl. 36: fig. 4. [Cuba.]

MIDDLE EOCENE

A. depressus Sánchez Roig, 1953c:144-145, pl. 3: fig. 10. [Cuba.]

Genus Echinogalerus König

UPPER CRETACEOUS

E. bochotnicensis Kongiel, 1950:316-317, 323-324, pl. 2: figs. 1-4. [Poland.] (Upper Maestrichtian.)

Genus Rhopostoma Cooke

PALEOCENE

Rhopostoma Cooke, 1959:26. Type-species: Ananchytes cruciferus Morton. [New Jersey, U.S.A.]

Order CLYPEASTEROIDA A. Agassiz

Suborder CLYPEASTERINA A. Agassiz

Family CLYPEASTERIDAE L. Agassiz

Genus Clypeaster Lamarck

RECENT

- C. chesheri Serafy, 1970:663-674, figs. 1, 2c, 2d, 3-7. [Caribbean-Gulf of Mexico.]
- C. cyclopilus H. L. Clark, 1941:118-120, pl. 10: fig. 1. [Cuba.]

- C. elongatus H. L. Clark, 1948:308-309, pl. 48: fig. 30, pl. 49: fig. 31, pl. 50: fig. 33. [Galápagos Islands, Eastern Pacific Ocean.]
- C. euclastus H. L. Clark, 1941:120-121, pl. 10: fig. 2. [Cuba.]
- C. eurychorius H. L. Clark, 1925c:10-11, pl. 3. [Off Natal Coast, South Africa.]
- C. eurypetalus H. L. Clark, 1925d:99, pl. 11: figs. a-c. [Pacific Ocean.]
- C. micropetalus H. L. Clark, 1925b:317-318, pl. 33. [Angola, southwest Africa.]
- C. miniaceus H. L. Clark, 1925a:150-151, pl. 9: fig. 5. [Macclesfield Bank, Indian Ocean.]

 C. oliveirai Krau, 1952:703-705, fig. 1, pls. 1-7.
- [Tropical Atlantic.]
- C. oshimensis Ikeda, 1935a:103-104, pl. 7: figs. 1-5. [Japan.]
- C. subdepressus (Gray) lobulatus Bernasconi, 1956: 35-36, fig. 2. [Brazil.]

PLEISTOCENE

- C. canimarensis Palmer in Sánchez Roig, 1949:78.
- C. japonicus Döderlein alta Hayasaka and Morishita, P., 1947:44-45, pl. 2: figs. 2a-b. [China.] (Riukiu Ls.)
- C. japonicus Döderlein plana Hayasaka and Morishita, P., 1947:44, pl. 4: figs. 3a-b. [Hsiaokangshan, Kaohsiunghsien, Taiwan, China.] (Riukiu Ls.)

TERTIARY

C. eurychorus Arnold and H. L. Clark, 1934:141, pl. 1: figs. 1-2. [Jamaica.]

LOWER TERTIARY

C. chiapasensis Mullerried, 1951:211-216, figs. 1-3. [Mexico.]

PLIOCENE

- C. blumenthali Lambert and Jeannet, 1928a:219. [Malaysia.]
- C. brevipetalus Martin in Jeannet and Martin, 1937:246-247, fig. 29. [Java, Indonesia.]

- C. malumbangensis Israelsky, 1933b:301-302, pl.1: fig. 1. [Philippine Islands, South Pacific Ocean.]
- C. mombasanus Currie, 1938:85-86, pl. 8: figs. 9a-c. [Kenya, east Africa.]
- C. okinawa Cooke, 1954:47, pl. 11: figs. 1-2. [Okinawa, Japan.] (Naha Ls. in lower part of Ryukyu Ls.)

UPPER PLIOCENE

C. marquerensis Durham, 1950:41, pl. 43: figs. 2-3. [California, U.S.A.]

MIDDLE PLIOCENE

C. revellei Durham, 1950:41, pl. 43: figs. 1, 7. [California, U.S.A.]

MIOCENE

- C. abruptus Sánchez Roig, 1926:49-50, pl. 8: fig. 2, pl. 9: fig. 1. [Cuba.]
- C. aciculatus Checchia-Rispoli, 1925:31–33, fig. 10, pl. 11: fig. 5. [Southern Italy.]
- C. aegyptiacus (Wright) Michelin var. syrticus Desio, 1934:197-198, fig. 11, pl. 19: fig. 1, pl. 20: fig. 1. [Libya.]
- C. aichinoi Checchia-Rispoli, 1925:30–31, fig. 9, pl. 8: figs. 2, 2a–b, pl. 14: fig. 3. [Southern Italy.]
- C. annandalei Koehler caviventer Deraniyagala, 1961:154, pl. 5: figs. 5-6. [Ceylon.]
- C. borgesi Lambert, 1934:247-248, pl. 5: fig. 1. [Angola, southwest Africa.]
- C. cermenatii Checchia-Rispoli, 1925:29-30, fig. 8, pl. 5: fig. 1, pl. 14: figs. 1, 1a-d. [Southern Italy.]
- C. cerullii Checchia-Rispoli, 1925:40-42, fig. 15, pl. 1: fig. 3, pl. 5: figs. 3, 3a-c. [Southern Italy.]
- C. cipollae Checchia-Rispoli, 1925:53–54, fig. 20, pl.1: figs. 4, 4a, pl. 11: figs. 1, 1a-b, 2-4. [Southern Italy.]
- C. concavus Cotteau puertoricanus Gordon, 1963: 635–636, fig. 2a, pl. 81: figs. 5–6. [Puerto Rico, West Indies.] (Cibao marl.)
- C. cortesei Checchia-Rispoli, 1925:49-50, pl. 1: figs. 2-2a, pl. 20: figs. 1-3. [Southern Italy.]
- C. defiorei Checchia-Rispoli, 1940a:13–14, fig. 7, pl. 1: figs. 2–2a. [Italy.]
- C. epianthus Meznerics, 1941:87–88, pl. 2: fig. 1, pl. 3: fig. 2. [Hungary.]

- C. franchii Checchia-Rispoli, 1925:43-44, fig. 17, pl. 18: figs. 1, 1a-b. [Southern Italy.]
- C. henjamensis Clegg, 1933:25-26, pl. 3: figs. 2a-c, 3a. [Persian Gulf.]
- C. julii Roman, 1952:408, footnote 2. [Antigua Island, British West Indies. For Anomalanthus gregoryi Lambert, 1915, not Clypeaster gregoryi Lambert, 1913.]
- C. kemencensis Meznerics, 1941:88, pl. 2: fig. 3, pl. 3: fig. 6. [Hungary.]
- C. kugleri Jeannet, 1928b:220. [Venezuela.]
- C. lamegoi Marchesini Santos, 1958:14-15, 20-21, pl. 3: figs. 1-3. [B₁ azil.]
- C. libycus Desio, 1929:321-322, fig. 33, pl. 34: figs. 1a-b. [Oasis of Giarabùb, Libya.]
- C. maulwarensis Clegg, 1933:23-24, pl. 3: figs. 1a-c. [Persian Gulf.]
- C. minihagali Deraniyagala, 1956:4, pl. 3: figs. 1-2. [Ceylon, Indian Ocean.]
- C. mutellensis de Loriol var. italica Checchia-Rispoli, 1940a:4-5, fig. 1, pl. 2: figs. 1-1a. [Italy.]
- C. paulinoi Marchesini Santos, 1958:15-16, 21, pl. 4: figs. 1-6. [Brazil.]
- C. portentosus Desmoulin var. turriculata Checchia-Rispoli, 1940a:9-11, fig. 5, pl. 1: fig. 1. [Italy.]
- C. pulchellus Checchia-Rispoli, 1925:23-24, fig. 6, pl. 13: figs. 3, 3a-b. [Southern Italy.]
- C. saipanicus Cooke, 1957:362, pl. 119: figs. 14-17. [Mariana Island, West Pacific Ocean.]
- C. tyrrenicus Checchia-Rispoli, 1925:27–29, fig. 7, pl. 8: figs. 1, 1a–b, pl. 14: fig. 2, pl. 22: figs. 1–1a. [Southern Italy.]
- C. zamboninii Checchia-Rispoli, 1925:39–40, fig. 14, pl. 3: figs. 3, 4, 4a, 5, pl. 4: figs. 3–4, pl. 23: figs. 4–4a. [Southern Italy.]

UPPER MIOCENE

- C. crassus Kier, 1963:30-32, fig. 24, pl. 11: figs. 1-3, table 1. [Florida, U.S.A.] (Tamiami Fm.)
- C. romani Kier, 1964a:610. [For C. crassus Kier, 1963, not L. Agassiz, 1840.]

MIDDLE MIOCENE

- C. cremai Checchia-Rispoli, 1929b:26–29, fig. 1, pl. 2: figs. 1–6. [Cyrenaica, Libya.]
- C. egregius Peron and Gauthier var. dallonii Lambert, 1938a:279-283, fig. 1. [North Africa.]

- C. garganicus Checchia-Rispoli, 1938:46-48, pl. 2: figs. 1-3. [Monte Gargano, Italy.]
- C. insignis Seguenza var. distincta Imbesi Smedile, 1958:42-43, pl. 21: fig. 5, pl. 22: figs. 2-2a. [Southern Italy.] (Tortonian?)
- C. insignis Seguenza var. robusta Imbesi Smedile, 1958:24-25, pl. 8: figs. 2-2a. [Southern Italy.] (Helvetian.)
- C. kugleri Jeannet, 1928a:19, pl. 2. figs. 4–6. [Venezuela.]
- C. millosevichi Checchia-Rispoli, 1923:2-5, figs. 1-3, pl. 1: figs. 1, 1a-b. [Sardinia.]
- C. novaresei Checchia-Rispoli, 1925:15-17, fig. 1, pl. 9: figs. 1, 1a-c, pl. 23: figs. 1-1a. [Southern Italy.] (Helvetian.)
- C. patae Imbesi Smedile, 1958:27-28, pl. 8: figs. 3, 3a-b, pl. 9: figs. 1, la-b. [Southern Italy.] (Helvetian.)
- C. reidii Wright var. campanulata Imbesi Smedile, 1958:39–40, pl. 16: fig. 3. [Southern Italy.] (Tortonian.)
- C. reidii Wright var. notha Imbesi Smedile, 1958: 31-32, pl. 11: figs. 2, 2a-b. [Southern Italy.] (Helvetian.)
- C. tariccoi Checchia-Rispoli, 1923:5-7, fig. 4, pl. 1: figs. 2, 2a-b. [Sardinia.]
- C. tavanii Imbesi Smedile, 1958:41–42, pl. 20: figs. 2, 2a–c, 3, 3a, pl. 22: figs. 1–1a. [Southern Italy.] (Tortonian.)
- C. trevisani Imbesi Smedile, 1958:40-41, pl. 17: figs. 2, 2a-b, pl. 19: figs. 1, 1a-b. [Southern Italy.]
- C. tumescens Imbesi Smedile, 1958:30-31, pl. 9: figs. 2, 2a-c, pl. 11: figs. 1, 1a-b. [Southern Italy.] (Helvetian.)

LOWER MIOCENE

- C. elevatus Sánchez Roig, 1949:83-84, pl. 8: figs. 1-3, pl. 10: fig. 1. [Cuba.] (Güines Fm.)
- C. herrerae Lambert in Sánchez Roig, 1926:49, pl. 8: fig. 1. [Cuba.]
- C. latirostris Agassiz var. prolata Venzo, 1935:227, pl. 18: fig. 6. [Italy.] (Lower Aquitanian.)
- C. palmeri Sánchez Roig, 1949:85. [Cuba. Although Sánchez Roig says it is Miocene, Brodermann (1949:319) places it in the Lower Miocene.]
- C. pinarensis Lambert and Sánchez Roig, 1934:22–24, 2 figs. [Cuba. Although Lambert considers it Oligocene, Brodermann (1949:319) says it is Lower Miocene.]

C. vasatensis Lambert, 1928b:94-95; 1928e:15, pl. 6: figs. 1-2. [France.] (Langhian/Burdigalian.)

OLIGOCENE/MIOCENE

- C. dalpiazi Socin, 1942:50-51. [Somaliland, East Africa.]
- C. moronensis Sánchez Roig, 1951:41-42, pl. 23: fig. 1, pl. 24: fig. 1. [Cuba.]

OLIGOCENE

- C. brodermanni Sánchez Roig, 1949:74-75, pl. 9: figs. 1-3. [Cuba. Brodermann (1949:319) says it is Upper Oligocene.]
- C. marinanus Jackson, 1937:231, pl. 12:fig. 2, pl. 13: fig. 1. [Mexico.]
- C. ovatus Palmer in Sánchez Roig, 1949:73-74. [Cuba. Brodermann (1949:319) says it is Upper Oligocene.]
- C. topilanus Jackson, 1937:232, pl. 13: figs. 2-3. [Mexico.]

UPPER OLIGOCENE

- C. densus Sánchez Roig, 1949:90–91, pl. 11: figs. 1–3. [Cuba.]
- C. guillermi Sánchez Roig, 1952e:119–120, pl. 7: fig. 2. [Cuba.]
- C. guadalupense Sánchez Roig, 1952e:121–122, pl.6: fig. 2, pl. 10: fig. 2. [Cuba.]
- C. hernandezi Sánchez Roig, 1949:94, pl. 50: figs. 1–2. [Cuba.]
- C. maribonensis Sánchez Roig, 1949:77, pl. 9: figs. 6-7. [Cuba. Although Sánchez Roig says it is Pleistocene, Brodermann (1949:319) places it in the Upper Oligocene.]
- C. pileus Israelsky, 1924:138, pl. 2: fig. 2, pl. 3: fig.2. [Mexico.]
- C. planus Sánchez Roig, 1949:93, pl. 9: figs. 4-5. [Cuba.]
- C. polygonalis Sánchez Roig, 1949:84-85, pl. 7: figs. 1-2. [Cuba. Although Sánchez Roig says it is Lower Miocene, Brodermann (1949:320) says it is from the Upper Oligocene.]
- C. profundus Sánchez Roig, 1949:91–92, pl. 6: figs. 1–3. [Cuba.]
- C. sanchezi Lambert in Sánchez Roig, 1926:48-49, pl. 6: fig. 1, pl. 7: figs. 1-2. [Cuba.]

- C. sandovali Sánchez Roig, 1949:89-90, pl. 13: figs. 1-2. [Cuba.]
- C. sanrafaelensis Palmer in Sánchez Roig, 1949:75. [Cuba.]
- C. tenuicoronae Palmer in Sánchez Roig, 1949:87, pl. 14: fig. 3. [Cuba. Although Sánchez Roig says it is Middle Oligocene, Brodermann (1949:320) considers it Upper Oligocene.]

LOWER OLIGOCENE

C. lopezriosi Sánchez Roig, 1953c:139, pl. 1: fig. 6. [Cuba.]

UPPER EOCENE

- C. calzadai Via and Padreny, 1970:94–96, fig. 3b. [Can Vilet, Castelltersol, province of Barcelona, Spain.] (Biarritzian-Bartonian.)
- C. moianensis Via and Padreny, 1970:90-93, fig. 1. [Moianés, province of Barcelona, Spain.] (Biarritzian-Bartonian.)

Genus Anomalanthus Bell

In the *Treatise*, Durham (Durham et al., 1966: U462) considers *Anomalanthus* a synonym of *Clypeaster* Lamarck.

OLIGOCENE

- A. elevatus Sánchez Roig, 1952e:138–139, pl. 9: figs.1–2. [Cuba.]
- A. guadalupense Sánchez Roig, 1952e:136–137, pl. 7: fig. 1, pl. 15: fig. 2. [Cuba.]
- A. rojasi Sánchez Roig, 1952e:138, pl. 14: figs. 1–2, pl. 16: fig. 1. [Cuba.]

UPPER OLIGOCENE

- A. gigas Sánchez Roig, 1953a:54, pls. 1-2. [Cuba.]
- A. oligocenicus Sánchez Roig, 1949:95, pl. 9: figs.1–2. [Cuba.]
- A. zanoletti Sánchez Roig, 1952e:137, pl. 12: figs. 1–2, pl. 13: fig. 1. [Cuba.]

Genus Bunactus Pomel

Durham (Durham et al., 1966:U462), in the *Treatise*, considers *Bunactus* an objective synonym of *Clypeaster*.

LOWER MIOCENE

- B. sanchezi Lambert altus Sánchez Roig, 1952e:127, pl. 3. [Cuba.]
- B. sanchezi Lambert gigantea Sánchez Roig, 1952e: 127–128, pl. 2. [Cuba.]

OLIGOCENE

B. aguayoi Sánchez Roig, 1952e:126, pl. 1: fig. 1. [Cuba.]

UPPER OLIGOCENE

B. santanae Sánchez Roig, 1952e:126–127, pl. 1: fig.2. [Cuba.]

Genus Coronanthus Lambert

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Coronanthus* a subjective synonym of *Clypeaster*.

RECENT

Clypeaster (Coronanthus) pateriformis Mortensen, 1948a:99. [Philippine Islands.]

OLIGOCENE

- C. (C.) artilesi Sánchez Roig, 1952c:4-5, pl. 1: fig. 4. [Cuba.]
- C. conceptionis Sánchez Roig, 1952e:128-129, pl. 8: figs. 1-2. [Cuba.]

Genus Herrerasia Sánchez Roig

Durham (Durham et al., 1966:U463) in the *Treatise* considers *Herrerasia* a subjective synonym of *Clypeaster*.

LOWER MIOCENE

Herrerasia Sánchez Roig, 1952e:135. Type-species: Clypeaster profundus Sánchez Roig. [Cuba.]

Genus Hesperaster H. L. Clark

RECENT

Hesperaster H. L. Clark, 1938:411. Type-species: H. arachnoides H. L. Clark, 1938:411-413, pl. 27: fig. 2. [Western Australia.]

QUATERNARY

H. crassus H. L. Clark, 1938:413-414, fig. 35A. [Western Australia.]

Genus Orthanthus Mortensen

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Orthanthus* a subjective synonym of *Clypeaster*.

RECENT

Clypeaster (Orthanthus) aloysioi Brito, 1959:1-4, fig. 1, pls. 1-2. [Brazil.]

C. (O.) durandi Cherbonnier, 1959b:370-372, figs. 8a-e, 9a-d. [French Guiana, South America.]

Genus Paratinanthus Lambert and Thiéry

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Paratinanthus* a subjective synonym of *Clypeaster*.

OLIGOCENE

P. lamberti Sánchez Roig, 1952e:132–133, pl. 16: fig. 2. [Cuba.]

Genus Platyclypeina Lambert and Thiéry

In the *Treatise* Durham (Durham et al., 1966: U463) considers *Platyclypeina* a synonym of *Clypeaster* Lamarck.

MIOCENE

Clypeaster (Platyclypeina) subcrustulum Desio, 1929:324–325, fig. 34, pl. 34: fig. 2. [Oasis of Giarabùb, Libya.]

Genus Rhaphidoclypus A. Agassiz

In the *Treatise*, Durham (Durham et al., 1966: U462) considers *Rhaphidoclypus* A. Agassiz a subjective synonym of *Clypeaster* Lamarck.

RECENT

Clypeaster (Rhaphidoclypus) fervens Koehler var. hiradicus Mortensen, 1948d:86-87, pl. 22: figs. 8, 10-11, pl. 65: fig. 12. [Japan.]

C. (R.) reticulatus (Linnaeus) var. sundaicus Mortensen, 1948d:77–78, pl. 17: figs. 3–10. [Indo-Pacific.]

OLIGOCENE

C. (R.) armadilloensis Sánchez Roig, 1953c:139-140, pl. 2: figs. 1-2. [Cuba.]

UPPER OLIGOCENE

R. costulatus Sánchez Roig, 1952e:130, pl. 13: fig. 2. [Cuba.]

R. rojasi Sánchez Roig, 1952e:130–131, pl. 5: fig. 2. [Cuba.]

Genus Rojasaster Sánchez Roig

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Rojasaster* a subjective synonym of *Clypeaster*.

UPPER OLIGOCENE

Rojasaster Sánchez Roig, 1952e:133-134. Typespecies: Clypeaster hernandezi Sánchez Roig. [Cuba.]

R. camagueyanus Sánchez Roig, 1952e:134–135, pl.4: figs. 1–2, pl. 6: fig. 1. [Cuba.]

Genus Stolonoclypus A. Agassiz

In the *Treatise*, Durham (Durham et al., 1966: U462) considers *Stolonoclypus* a subjective synonym of *Clypeaster* Lamarck.

RECENT

Clypeaster (Stolonoclypus) lutkeni Mortensen, 1948d:121-123, figs. 67-68, pl. 25: figs. 3-5, pl. 27:

fig. 3, pl. 68: figs. 21–22; 1948e:69. [West Indies.] *C.* (*S.*) *nummus* Mortensen, 1948d:127, pl. 14: figs. 4–6, pl. 16: fig. 3, pl. 68: fig. 12; 1948e:69. [Tahiti, Society Islands, South Pacific Ocean.]

MIOCENE

- S. ichnusae Checchia-Rispoli, 1928:12–17, fig. 3, pl. 2: fig. 4. [Sardinia.]
- S. incertus Checchia-Rispoli, 1928:19–20, pl. 2: fig. 3. [Sardinia.]
- S. pusillus Checchia-Rispoli, 1928:8–9, fig. 2, pl. 1: figs. 1–1a, pl. 3: fig. 6. [Sardinia.]

Genus Tholeopelta Lambert and Thiéry

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Tholeopelta* a subjective synonym of *Clypeaster*.

OLIGOCENE

T. herrerae Sánchez Roig, 1951:40-41. [Cuba.]

Genus Zanolettia Sánchez Roig

In the *Treatise*, Durham (Durham et al., 1966: U463) considers *Zanolettia* a subjective synonym of *Clypeaster* Lamarck.

OLIGOCENE

Zanolettia Sánchez Roig, 1951:39. Type-species: Z. zanolettii Sánchez Roig, 1951:40, pl. 23: figs. 2–3. [Cuba.]

UPPER OLIGOCENE

Z. gigantea Sánchez Roig, 1952c:3–4, pl. 12: figs. 1–2. [Cuba.]

Family ARACHNOIDIDAE Duncan

Subfamily ARACHNOIDINAE Duncan

Genus Arachnoides Leske

RECENT

A. tenuis H. L. Clark, 1938:415-417, pl. 27: figs. 3-4. [Western Australia.]

Genus Fellaster Durham

RECENT/PLIOCENE

Fellaster Durham, 1955:125-127, figs. 1f, 8i, 26f, 29b. Type-species: Arachnoides zelandiae Gray. [New Zealand.]

Subfamily AMMOTROPHINAE Durham

Ammotrophinae Durham, 1955:127. Type-genus: Ammotrophus H. L. Clark. [South Australia and Tasmania.]

Genus Ammotrophus H. L. Clark

RECENT

Ammotrophus H. L. Clark, 1928:471. Type-species: A. cyclius H. L. Clark, 1928:471-474, fig. 140. [South Australia.]

A. platyterus H. L. Clark, 1928:474-475, fig. 141. [South Australia.]

Genus Scutellinoides Durham

MIOCENE

Scutellinoides Durham, 1955: 128-129. Type-species: Scutellina patella Tate. [Australia.]

Suborder LAGANINA Mortensen

Genus Pentedium Kier

MIDDLE EOGENE

Pentedium Kier, 1967:989–990. Type-species: P. curator Kier, 1967: 990–993, figs. 1–3, pl. 129: figs. 3–4, pl. 130: figs. 2–7. [Georgia, U.S.A. Family is not known for this genus.]

Family FIBULARIIDAE Gray

Genus Fibularia Lamarck

Because of confusion concerning the type-species of this genus, some of these species probably belong to *Echinocyamus*.

RECENT

- F. craniolaris H. L. Clark, 1928:477. [South Australia.]
- F. plateia H. L. Clark, 1928:477-478, fig. 142. [South Australia.]

TERTIARY

F. rhedeni Lambert and Jeannet, 1928a:219. [Malaysia.]

UPPER TERTIARY

F. scrobiculata Lambert, 1931c:85, fig. 5, pl. 3: figs. 27–29. [Algiers, North Africa.]

MIOCENE

- F. dubarensis Kier, 1957b:870-871, fig. 7c-e, pl. 104: figs. 9-11. [British Somaliland, East Africa.] (Dubar series.)
- F. excavata H. L. Clark, 1945:320-321, pl. 42: figs. d-f. [Fiji, South Pacific Ocean.]
- F. sandalina Szörényi, 1953:13, 60, pl. 5: figs. 6-6a. [Ukraine.]

MIDDLE MIOCENE

- F. sadeki Lambert, 1931d:209, pl. 5: figs. 25-30. [Egypt.] (Helvetian.)
- F. sulcata Lambert, 1928b:92, fig. 8. [France.] (Helvetian.)

LOWER MIOCENE

F. junior Lambert, 1928b:91-92, fig. 7. [France.] (Langhian/Burdigalian.)

OLIGOCENE

- F. africana Checchia-Rispoli, 1929a:4-6, pl. 1: figs. 1-4. [Cyrenaica, Libya.]
- F. cimex Lambert, 1938a:278-279, pl. 19: figs. 9-11. [Algeria, North Africa.]
- F. cyrenaica Checchia-Rispoli, 1929a:6-8, pl. 1: figs. 5-8. [Cyrenaica, Libya.]

EOCENE

F. abrardi Lambert, 1924b:98, fig. 1. [France.]

UPPER EOCENE

- F. alabamensis Cooke, 1959:31, pl. 9: figs. 20-22. [Alabama, U.S.A.] (Probably Moodys Branch Fm.)
- F. minuta Palmer in Sánchez Roig, 1949:64-65. [Cuba.]

MIDDLE EOCENE

- F. barbadosensis Kier, 1966b:4-7, figs. 1(pt.), 2(pt.), 3(pt.), 4, 5a, 6a(pt.), 8, 9, pl. 1: figs. 1-3. [Barbados, Lesser Antilles, West Indies.] (Upper Scotland Fm.)
- F. farallonensis Cooke, 1961:16, pl. 4: figs. 1-6. [Trinidad, Caribbean Ocean.]

CENOZOIC/CAINOZOIC?

F. jacksoni Hawkins in Arnold and H. L. Clark, 1927:27–28, 76–77, pl. 4: figs. 3–5, pl. 22: figs. 1–3. [Jamaica, West Indies.]

Genus Cyamidia Lambert and Thiéry

EOCENE

C. paucipora Brunnschweiler, 1962:162–164, fig. 1. [Western Australia.] (Cuisian/Lutetian.)

Genus Echinocyamus van Phelsum

Because of confusion concerning the type-species of this genus, some of these species may belong to *Fibularia*.

RECENT

- E. apicatus Mortensen, 1948d:195-196, figs. 98, 114, pl. 46: figs. 40-45; 1948e:71. [Australia.]
- E. convergens Mortensen, 1948d:191-192, fig. 102b, pl. 46: figs. 56-58; 1948e:72. [Providence Island, West Indian Ocean.]
- E. crenulatus H. L. Clark, 1925a:164-165, pl. 9: figs. 3-4. [Gambia, northwest Africa.]

- E. grandis H. L. Clark, 1925a:165-166, pl. 9: figs. 6-8. [Gambia, northwest Africa and Seychelle Islands, Indian Ocean.]
- E. planissimus H. L. Clark, 1938:422-423, pl. 27: figs. 5-8. [Western Australia.]
- E. terminalis Grant and Hertlein, 1938b:48-49, figs. 5, 6a-b. [Mexico.]
- E. scaber de Meijere var. subconicus Mortensen, 1948d:188, pl. 46: figs. 34–36; 1948e:71. [Malaysia, Kei Island.]

PLEISTOCENE

E. prostratus Nisiyama, 1968:50-52, figs. 31a-d. [Southern Japan, Ryukyu Island.]

MIOCENE

- E. chipolanus Cooke, 1942:29-30, pl. 1: figs. 9-11. [U.S.A.] (Chipola Fm.)
- E. lipparinii Airaghi, 1939:283–284, pl. 12: figs. 20–23. [North Africa.]
- E. parviporus Kier, 1964b:1124–1125, figs. 331c–e, pl. 302: figs. 11–15. [Marshall Islands, West Pacific Ocean.]
- E. subpiriformis Cottreau, 1933:544, pl. 27: figs. 3-3b. [France.]
- E. woodi Currie, 1930:172, pl. 16: fig. 1. [East Africa.]

OLIGOCENE

E. schoelleri Castex, 1947:31. [France.]

UPPER OLIGOCENE

E. avilensis Lambert, 1931e:298-299, fig. 2. [Cuba. Although Sánchez Roig says it is Tertiary, Brodermann (1949:321) places it in Upper Oligocene of Cuba.]

EOCENE

- E. jacqueti Lambert, 1936a:349–350, pl. 21: figs. 16–18. [Senegal, West Africa.]
- E. jeanneti Lambert, 1931d:200, fig. 11, pl. 5: figs. 31-33. [Egypt.]
- E. rostratus Lambert, 1929:193, figs. 1-2. [Madagascar, off east coast of Africa.]

UPPER EOCENE

- E. macneili Cooke, 1959:32-33, pl. 9: figs. 6-8. [Alabama, U.S.A.] (Probably Moodys Branch Fm.)
- E. petalus Kier, 1964b:1121-1124, fig. 330, pl. 302: figs. 1-7. [Marshall Islands, West Pacific Ocean.]

MIDDLE EOCENE

- E. bisexus Kier, 1968b:12-21, figs. 11-23, pl. 3: figs. 1-6, pl. 4: figs. 1-2. [Georgia, U.S.A.]
- E. caribbeanensis Kier, 1966b:7-8, figs. 10 (part), 11(part), 12a-d, pl. 1: figs. 4-5. [Barbados, Lesser Antilles, West Indies.] (Upper Scotland Fm.)
- E. basseae Lambert, 1936c:30, pl. 3: fig. 26. [Madagascar, off East Africa.] (Lower Lutetian.)
- E. maropiensis Lambert, 1936c:30, pl. 3: figs. 23-25. [Madagascar, off East Africa.] (Lower Lutetian.)

LOWER EOCENE

- E. cyphostomus Lambert in Lambert and Jacquet, 1936:349, pl. 21: figs. 12–15. [Senegal, West Africa.]
- E. cyphostomus Lambert var. sulcata Lambert in Lambert and Jacquet, 1936:349, pl. 21: fig. 15. [Senegal, West Africa.]
- E. planus Lambert, 1933a:32-33, pl. 2: figs. 13-15. [Madagascar, off East Africa.]

UPPER CRETACEOUS

E. kamrupensis Das Gupta, 1929:26, pl. 2: fig. 3. [India.] (Upper Senonian.)

Genus Eoscutum Lambert

EOCENE

- Scutellina (Eoscutum) orientalis Vialov and Manouilenko, 1939:151-153, 167-169, pl. 1: figs. 1, 2a-d, 3-4, 6. [U.S.S.R.] (Alaï stage.)
- S. (E.) orientalis Vialov and Manouilenko var. elongata Vialov and Manouilenko, 1939:160–161, 174–175, pl. 2: figs. 4a–d. [U.S.S.R.] (Alaï stage.)
- S. (E.) orientalis Vialov and Manouilenko var. kalizkyi Vialov and Manouilenko, 1939:155–156, 170–171, pl. 1: fig. 5. [U.S.S.R.] (Alaï stage.)

- S. (E.) orientalis Vialov and Manouilenko var. nalivkini Vialov and Manouilenko, 1939:156–157, 171, pl. 2: figs. 5a-c. [U.S.S.R.] (Alaï stage.)
- S. (E.) orientalis Vialov and Manouilenko var. pentagona Vialov and Manouilenko, 1939:158–160, 172–174, pl. 2: figs. 2a-c, 3. [U.S.S.R.] (Alaï stage.)
- S. (E.) orientalis Vialov and Manouilenko var. rotula Vialov and Manouilenko, 1939:157–158, 171–172, pl. 1: figs. 7a–c, 8, pl. 2: figs. 1a–c. [U.S.S.R.] (Alaï stage.)

Genus Fibulariella Mortensen

RECENT

- Fibularia (Fibulariella) Mortensen, 1948d:219; 1948e:72. Type-species: Fibularia acuta Yoshiwara. [Indo-Pacific Ocean.]
- F. (F.) angulipora Mortensen, 1948d:224-225, fig. 121, pl. 46: figs. 1-4, 12-14; 1948e:72. [Gulf of Siam.]
- F. (F.) oblonga Gray var. ambonensis Mortensen, 1948d:223-224, pl. 46: figs. 10-11. [Malaysia and south, west, and north Australia.]

Genus Lenicyamidia Brunnschweiler

EOCENE

Lenicyamidia Brunnschweiler, 1962:165. Typespecies: L. compta Brunnschweiler, 1962:165–169, figs. 2–3. [Western Australia.] (Cuisian/Lutetian.)

Genus Leniechinus Kier

MIDDLE EOCENE

Leniechinus Kier, 1968b:4-5. Type-species: L. herricki Kier, 1968b:5-12, figs. 1-3, 5-10, pl. 1: figs. 3-4, pl. 2: figs. 1-5. [Georgia, U.S.A.]

Genus Lenita Desor

EOCENE

L. israelskyi Grant and Hertlein, 1938b:49, pl. 8: figs. 6-7, 9. [U.S.A.]

Genus Porpitella Pomel

MIDDLE EOCENE

- P. micra H. L. Clark, 1937a:248-249, figs. 1-3. [Alabama, U.S.A.] (Claiborne Fm.)
- P paleocaenica Villatte, 1966a:518–519, pl. 1: figs. 1–3. [France.]

Genus Scutellina L. Agassiz

EOCENE

- S. balcanica Gočev, 1933:47, pl. 7: figs. 13–17. [Bulgaria.]
- S. conica Gočev, 1933:48, pl. 7: figs. 18a-d. [Bulgaria.]
- S. transsylvanica Barbu and Dragos, 1957:647-649, pl. 2: figs. 3, 6, 8, 9, pl. 3: figs. 10-14, 18-19. [Rumania.] (Upper Lutetian.)
- S. transsylvanica Barbu and Dragos, var. oblonga Barbu and Dragos, 1957:650-653, pl. 2: figs. 2, 5. [Rumania.] (Upper Lutetian.)
- S. transsylvanica Barbu and Dragos var. orbiculata Barbu and Dragos, 1957: 649-650, pl. 2: figs. 4, 7, pl. 3: figs. 15, 17, 20-21. [Rumania.] (Upper Lutetian.)

Genus Tarphypygus Arnold and H. L. Clark

EOCENE

- Tarphypygus Arnold and H. L. Clark, 1927:42. Type-species: T. ellipticus Arnold and H. L. Clark, 1927:43, pl. 6: figs. 10–12. [Jamaica. West Indies.]
- T. notabilis Arnold and H. L. Clark, 1927:43-44, pl. 6: figs. 13-15. [Jamaica, West Indies.]

UPPER EOCENE

- T. palmeri Sánchez Roig, 1949:170. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:328) considers it Middle to Upper Eocene.]
- T. sulcatus Sánchez Roig, 1949:170-171, pl. 50: fig. 5. [Cuba. Although Sánchez Roig says it is Upper Oligocene, Brodermann (1949:328) considers it Middle to Upper Eocene.]

Genus Togocyamus Oppenheim

PALEOCENE

T. alloiteaui Roman and Gorodiski, 1959:51-52, pl. 3: figs. 20-23. [Senegal.]

Family LAGANIDAE A. Agassiz

Genus Laganum Link

NEOGENE

L. boschi Martin in Jeannet and Martin, 1937: 253-254, figs. 35, 36a-b. [Dutch East Indies, West Pacific Ocean.]

RECENT

- L. boninense Mortensen, 1948d:328-330, fig. 162b, pl. 55: figs. 1-3, pl. 70: fig. 12; 1948e:70. [Bonin Island (Japan), West Pacific Ocean.]
- L. centrale H. L. Clark, 1925a:155-156, pl. 9: figs. 1-2. [Tongatabu Reefs, Tonga Archipelago, South Pacific Ocean.]
- L. depressum L. Agassiz var. alienum Mortensen, 1948d:322-323, pl. 53: figs. 31-32; 1948e:69. [Indo-Pacific.]
- L. depressum L. Agassiz var. tenue Mortensen, 1948d:319-322, pl. 53: figs. 3-4, 9; 1948e:69. [Indo-Pacific.]
- L. dickersoni Israelsky var. keiense Mortensen, 1948d:327-328, fig. 199c, pl. 53: figs. 2-5, pl. 70: figs. 11, 13; 1948e:70. [Malaysia.]
- L. dyscritum H. L. Clark, 1932:216-217, pl. 1: figs. 5-9. [Low Isles, Tuamotu Archipelago, South Pacific Ocean.]
- L. fudsiyama Döderlein var. africanum Mortensen, 1948d: 342-344, pl. 55: fig. 10; 1948e:70. [Natal, eastern Union of South Africa.]
- L. fudsiyama Döderlein var. indicum Mortensen, 1948b:8; 1948d:342, pl. 55: figs. 5-6, 11-13; 1948e:70. [Mauritius, Indian Ocean.]
- L. joubini Koehler var. formosum Mortensen, 1948d:331, pl. 55: fig. 4; 1948e:70. [Mauritius, Indian Ocean.]
- L. mirable H. L. Clark, 1925a:158-159, pl. 9: figs. 9-10. [Madras, southeast India.]

PLIOCENE

- L. dickersoni Israelsky, 1933b:302-303, pl. 2: figs. 1-9. [Philippine Islands, South Pacific Ocean.]
- L. equaepetala Israelsky, 1933b:303-304, pl. 2: figs. 10-12. [Philippine Islands.]
- L. fudsiyama Döderlein untenensis Cooke, 1954:48, pl. 9: figs. 7-11. [Okinawa, Japan.] (Naha Ls. in lower part of Ryukyu Ls.)

MIOCENE

L. pachycraspedum Nisiyama, 1968:73-74, pl. 15: figs. 9-10, 17. [Japan.] (Shirahama (Susaki) Fm.)

LOWER MIOCENE

L. fudsiyama Döderlein takunagai Otuka, 1938: 18-19, pl. 2: figs. 22-23. [Japan.] (Siroyama Ss.)

OLIGOCENE

L. leptum Jackson, 1937:233, pl. 13: fig. 4. [Mexico.]

UPPER EOCENE

- L. cubanum Weisbord, 1934:48-50, pl. 4: figs. 8-10. [Cuba.]
- L. lamberti Sánchez Roig, 1949:108-109, pl. 16: fig. 2. [Cuba. Although Sánchez Roig says it is Upper Oligocene, Brodermann (1949:323) considers it Middle to Upper Eocene.]
- L. ocalanum Cooke, 1942:23-24, pl. 2: figs. 7-10. [U.S.A.]
- L. santanae Sánchez Roig, 1949:109-110, pl. 15: figs. 1-2. [Cuba. Although Sánchez Roig says it is Upper Oligocene, Brodermann (1949:323) considers it Middle to Upper Eocene.]

Genus Jacksonaster Lambert and Thiéry

PLIOCENE

- J. gauthieri Lambert, 1931d:214-215, pl. 6: figs. 2-4. [Red Sea.]
- J. herklotzi Jeannet in Jeannet and Martin, 1937: 262-263, figs. 40a-c, 41-42. [Java, Indonesia.]

OLIGOCENE

- J. acunai Lambert in Sánchez Roig, 1926:59-60, pl. 13: figs. 6-7, 9. [Cuba.]
- J. acunai Lambert var. nuevitasensis Lambert in Sánchez Roig, 1926:60, pl. 13: fig. 9. [Cuba.]
- J. sanchezi Lambert in Sánchez Roig, 1926:61, pl. 13: figs. 4-5, 8. [Cuba.]
- J. torrei Lambert in Sánchez Roig, 1926:61-64, pl. 12: figs. 1-3. [Cuba.]

UPPER EOCENE

- J. depressus Sánchez Roig, 1949:108, pl. 16: figs. 6-7. [Cuba.]
- J. remediensis Sánchez Roig, 1949:106-107, pl. 16: fig. 5. [Cuba.]

MIDDLE EOCENE

J. sandiegensis Sánchez Roig, 1949:107-108, pl. 16: figs. 3-4. [Cuba.]

Genus Peronella Gray

RECENT

- P. japonica Mortensen, 1948d:277-280, figs. 177c, 178c, 180b, 184a, 187a, pl. 49: figs. 1, 6-12; 1948e:71. [Japan.]
- P. keiensis Mortensen, 1948d:291-292, figs. 163e, 182c, 187e, pl. 49: figs. 2-5, pl. 72: figs. 7-8, 14; 1948e:71. [Malaysia.]
- P. lesueuri (Valenciennes) var. gadiana Mortensen, 1948d:270-272, fig. 177b, pl. 50: figs. 4-5, 9-10; 1948e:70. [Malaysia.]
- P. oblonga Mortensen, 1948d:299-300, fig. 188c, pl. 51: figs. 33-34; 1948e:71. [India.]
- P. orbicularis (Leske) var. concava Mortensen, 1948d:289-291, fig. 170c, pl. 51: figs. 26-28; 1948e:71. [Malaysia.]

PLIOCENE

- P. kamimura Cooke, 1954:47–48, pl. 11: figs. 5–6. [Okinawa, Japan.] (Naha Ls. in lower part of Ryukyu Ls.)
- P. merrilli Israelsky, 1933b:304-305, pl. 2: figs. 17-19. [Philippine Islands.]

- P. motobu Cooke, 1954:48, pl. 10: figs. 1-2. [Okinawa, Japan.] (Naha Ls. in lower part of Ryukyu Ls.)
- P. ragayana Israelsky, 1933b:305, pl. 2: figs. 13-16. [Philippine Islands.]

EOCENE

- P. kloosi Molengraaff, 1929:76-77, pl. 26: figs. 3-4. [Curaçao, Dutch West Indies.]
- P. lamberti Mortensen, 1927b:73, pl. 4: figs. 4-7; 1948d:256. [Spain. New name for Echinodiscus rostratus Lambert, 1927b.]
- P. martini Molengraaff, 1929:73-76, pl. 25: figs. 2-3, pl. 26: figs. 1-2. [Curação, Dutch West Indies.]

UPPER EOCENE

- P. caribbeana Weisbord, 1934:52–53, pl. 5: figs. 7–9. [Cuba.]
- P. cubae Weisbord, 1934:53-54, pl. 5: figs. 4-6. [Cuba.]
- P. quinquenodulata Weisbord, 1934:50-52, pl. 5: figs. 1-3. [Cuba.]

Genus Peronellites Hayasaka and Morishita

MIOCENE

Peronella (Peronellites) Hayasaka and Morishita, A., 1947:101. Type-species: Peronella (Peronellites) ovalis Hayasaka and Morishita, A., 1947: 101-103, pl. 8: figs. 3, 5. [China.]

Genus Rumphia Desor

UPPER OLIGOCENE

R. elegans Sánchez Roig, 1949:100–101, pl. 16: fig.l. [Cuba.]

Genus Sismondia Desor

MIDDLE MIOCENE

S. naganoensis Morishita, 1953:218-219, fig. 2, pl. 1: figs. 1-2. [Japan.] (Lower part of Aoki Fm.)

LOWER MIOCENE

S. javana Gerth ladronensis Nisiyama, 1968:59-61, pl. 13: figs. 6, 8-10, 13-16, pl. 14: figs. 3-8. [Saipan Island, Mariana Islands, Western Pacific.] (Donny-Tagpochau Fm., Aquitanian.)

OLIGOCENE

S. convexa Nisiyama, 1937:41-45, figs. 1-13. [Bonin Islands, Japan.]

EOCENE

S. crustula Hawkins in Arnold and H. L. Clark, 1927:28, 78-79, pl. 22: figs. 4-5. [Jamaica, West Indies.]

LOWER EOCENE

S. barabirensis Lambert, 1931d:200-201, pl. 5: figs. 34-36. [Egypt.]

Family NEOLAGANIDAE Durham

Neolaganidae Durham, 1954:680. Type-genus: Neolaganum Durham. [Gulf of Mexico.]

Genus Neolaganum Durham

UPPER EOCENE

Neolaganum Durham, 1954:680-681. Type-species: Laganum archerensis Twitchell. [Gulf of Mexico.] N. durhami Cooke, 1959:52, pl. 21: figs. 5-7. [Florida, U.S.A.] (Inglis and Ocala Ls.)

Genus Cubanaster Sánchez Roig

UPPER EOCENE

- Cubanaster Sánchez Roig, 1952a:3. Type-species: Jacksonaster torrei Lambert in Sánchez Roig, 1926. [Cuba.]
- C. acunai Lambert gigas Sánchez Roig, 1952a:5, pl.3: fig. 1. [Cuba.]
- C. camagueyensis Sánchez Roig, 1952a:4, pl. 2: figs. 3-4. [Cuba.]

- C. herrerai Sánchez Roig, 1952a:6-7, pl. 1: fig. 7, pl. 3: fig. 2. [Cuba.]
- C. planipetalum Sánchez Roig, 1952a:7-8, pl. 1: figs. 2, 5. [Cuba.]
- C. santanae Sánchez Roig, 1952a:8, pl. 1: figs. 3-4. [Cuba.]

Genus Durhamella Kier

MIDDLE EOCENE

Durhamella Kier, 1968b:23-24. Type-species: Laganum ocalanum Cooke. [Georgia, U.S.A.]

Genus Neorumphia Durham

UPPER OLIGOCENE

Neorumphia Durham, 1954:681-682. Type-species: Rumphia elegans Sánchez Roig. [Cuba.]

Genus Sanchezella Durham

EOCENE

Sanchezella Durham, 1954:682. Type-species: Jack-sonaster sanchezi Lambert. [West Indies.]

Genus Weisbordella Durham

UPPER EOCENE

Weisbordella Durham, 1954:682. Type-species: Peronella caribbeana Weisbord. [Gulf of Mexico.]

Genus Wythella Durham

UPPER EOCENE

Wythella Durham, 1954:682-684. Type-species: Laganum eldridgei Twitchell. [Gulf of Mexico.]

Suborder SCUTELLINA Haeckel

Family SCUTELLIDAE Gray

Genus Scutella Lamarck

MIOCENE

S. almerai Lambert parva Szörényi, 1953:19, 67, pl.1: figs. 6, 6a-b. [Ukraine.]

- S. checchiae Desio, 1929:305-307, fig. 28, pl. 33: figs. 1a-b, pl. 38: figs. 2a-b. [Oasis of Giarabùb, Libya.]
- S. checchiae Desio var. occidentalis Desio, 1934:193, fig. 8, pl. 17: fig. 1. [Libya.]
- S. eichwaldi Szörényi, 1953:19–20, 67–68, pl. 1: fig.5. [Ukraine.]
- S. floridana Cooke, 1942:19, pl. 4: figs. 9–10. [U.S.A.] (Hawthorn Fm.)
- S. isidis Fourtau var. bardiensis Desio, 1929:304–305, pl. 39: figs. 1a-b. [Oasis of Giarabùb, Libya.] (Vindobonian.)
- S. robecchibricchettii Desio, 1929:309–311, fig. 30, pl. 38: figs. 1a-b. [Oasis of Giarabùb, Libya.]
- S. stefaninii Desio, 1929:307-309, fig. 29, pl. 40: figs. 3a-b. [Oasis of Giarabùb, Libya.]
- S. stefaninii Desio var. syrtica Desio, 1934:194-195, fig. 10, pl. 18: figs. 1a-b. [Libya.]
- S. szoerenyiae Sándor, 1969:255, pl. 1: figs. 1-2, pl.2: fig. 1. [Hungary.]

MIDDLE MIOCENE

- S. media Schaffer, 1962:151–153, figs. 1d–e, pl. 17: figs. 2–3. [Austria.] (Upper Helvetian.)
- S. montagnai Mirigliano, 1957:9–12, fig. 1, pl. 1: figs. 1–2. [Italy.]
- S. multiconcava Schaffer, 1962:154–156, fig. 10, pl. 17: figs. 4–5, pl. 18: figs. 1–5. [Austria.] (Lower Tortonian.)
- S. styriaca Schaffer, 1962:153–154, fig. 9, pl. 19: fig. 1. [Austria.] (Middle Tortonian.)
- S. vindobonensis Laube planata Kókay in Somos and Kókay, 1960:341-342, 346, pl. 16: figs. 1-2, pl. 17: fig. 3. [Hungary.]
- S. vindobonensis Laube secunda Schaffer, 1962:157–159, fig. 11, pl. 19: figs. 2, 4. [Austria.] (Middle to upper Tortonian.)

LOWER MIOCENE

- S. hobarthi Kühn, 1936:40-43, figs. 2-3, pl. 1: figs. 1-3. [Austria.] (Burdigalian/Aquitanian.)
- S. pseudosubrotundaeformis Venzo, 1933:208-209; 1935:223-225, pl. 18: fig. 4. [Italy. New name for S. subrotundaeformis Oppenheim, 1903, not Schauroth, 1865.] (Chattian to Aquitanian.)
- S. scurellensis Venzo, 1933:209; 1935:226-227, pl. 18: figs. 1-2, pl. 19: fig. 4. [Italy.]

PALEOGENE

S. niponica Nagao, 1928:16, pl. 1: figs. 5-6. [Japan.]

OLIGOCENE

- S. chiesai Airaghi, 1939:268, pl. 12: figs. 3–6. [North Africa.]
- S. habanensis Sánchez Roig, 1949:113-114, pl. 33: fig. 2. [Cuba. Brodermann (1949:328) says it is Lower to Upper Oligocene.]

UPPER EOCENE

- S. camagueyana Weisbord, 1934:56–57, pl. 5: figs. 13–14. [Cuba.]
- S. cubae Weisbord, 1934:55–56, pl. 5: figs. 10–12. [Cuba.]

Genus Parascutella Durham

LOWER MIOCENE

Parascutella Durham, 1953a:349-350. Type-species: Scutella leognanensis Lambert. [France.] (Burdigalian.)

Family PROTOSCUTELLIDAE Durham

Protoscutellidae Durham, 1955:153. Type-genus: Protoscutella Stefanini. [Gulf of Mexico and the Atlantic coast of North America.]

Genus Protoscutella Stefanini

MIDDLE EOCENE

P. pentagonium Cooke, 1942:18, pl. 2: figs. 4–6. [U.S.A.]

Genus Periarchus Conrad

UPPER EOCENE

- P. kewi Cooke, 1942:16, pl. 1: figs. 12-14. [U.S.A.]
- P. lyelli Conrad floridanus Fischer, 1951:60-64, figs.
 4-5, pl. 1: figs. 1-4. [U.S.A.]
- P. rutriformis Paulson, 1958:362-365, figs. 5-6, 8. [North Carolina, U.S.A.]

Family EOSCUTELLIDAE Durham

Eoscutellidae Durham, 1955:156. Type-genus: Eoscutella Grant and Hertlein. [California and Oregon, U.S.A.]

Genus Eoscutella Grant and Hertlein

UPPER EOCENE

Eoscutella Grant and Hertlein, 1938b:54. Type-species: Scutella coosensis Kew. [North America.]

Family DENDRASTERIDAE Lambert

Genus Dendraster L. Agassiz

RECENT

- D. excentricus (Eschscholtz) var. elongatus H. L. Clark, 1935:122–123. [California, U.S.A. (off the Coronados Islands).]
- D. laevis H. L. Clark, 1948:312-313, pl. 50: figs. 34-36. [California, U.S.A., and northwest Mexico.]
- D. mexicanus H. L. Clark, 1948:313, 317, pl. 51: figs. 37–39. [Lower California, U.S.A.]
- D. rugosus H. L. Clark, 1948:318-319, pl. 52: figs. 40-41. [Lower California Bay, San Sebastian Vizcaino, U.S.A.]

QUATERNARY

D. vizcainoensis Grant and Hertlein, 1938b:90, pl.8: figs. 1-3. [California, U.S.A.]

UPPER PLEISTOCENE

D. vizcainoensis Grant and Hertlein similaris Grant and Hertlein, 1938b: 90-91, pl. 27: figs. 1-2, pl. 28: fig. 8. [California, U.S.A.] (Palos Verdes Fm.)

PLIOCENE

D. gibbsii Rémond var. mirus Stewart in Woodring, Stewart, and Richards, 1940: 66, 80, pl. 44: figs. 4-5. [California, U.S.A.] (Siphonalia zone, Etchegoin Fm.)

UPPER PLIOCENE

D. casseli Grant and Hertlein, 1938b: 81-82, pl. 1: figs. 1-3, pl. 30: fig. 3. [California, U.S.A.]

MIDDLE PLIOCENE

D. granti Durham, 1950:41–42, pl. 47: figs. 3–12. [California, U.S.A.]

LOWER PLIOCENE

D. elsmerensis Durham, 1949:50-62, fig. 2f, pl. 1: figs. 2-4, 6. [U.S.A.]

Genus Orchoporus Lambert and Thiéry

In the *Treatise*, Durham (Durham et al., 1966: U481) considers *Orchoporus* a synonym of *Merriamaster* Lambert.

MIDDLE MIOCENE

O. lamberti Grant and Hertlein, 1938b:52, pl. 9: figs. 3, 6. [California, U.S.A.]

Genus Scaphechinus A. Agassiz

MIOCENE

Echinarachnius (Scaphechinus) raritalis Nisiyama, 1951:3-5, figs. 1-3. [Japan.] (Taya Fm.)

Genus Anorthoscutum Lambert and Thiéry

In the *Treatise*, Durham (Durham et al., 1966: U481) considers *Anorthoscutum* a synonym of *Scutellaster* Cragin.

UPPER PLIOCENE

A. oregonense Clark quaylei Grant and Hertlein, 1938b:93, pl. 21: fig. 13, pl. 30: fig. 11. [California, U.S.A. For Dendraster (Calaster) oregonensis gibbosus Kew.] (Upper Wildcat Fm.)

Family ECHINARACHNIIDAE Lambert

Genus Echinarachnius Leske

In the *Treatise*, Durham (Durham et al., 1966: U482) considers *Echinarachnius* Leske a subjective synonym of *Arachnoides* Leske.

RECENT

E. brevis Ikeda, 1936a:1231-1233, figs. 1a-c. [Japan.]
E. griseus Mortensen, 1927a:195-200, figs. 1a, 2, pl. 1: figs. 1-4. [Japan.]

NEOGENE

Echinarachnius (Echinarachnius) laganolithinus Nisiyama, 1940–1941:830–832, fig. 12, pl. 44: fig. 21, pl. 45: figs. 1–9. [Japan.] (Sibikawa Ss. beds.)

E. (E.) microthyroides Nisiyama, 1940–1941:828–829, fig. 11, pl. 44: figs. 17–20. [Japan.] (Suenomatuyama beds.)

LOWER PLEISTOCENE

E. parma (Lamarck) var. sakhalinensis Argamakova, 1934:25, 40, pl. 1: fig. 3. [U.S.S.R.]

PLIOCENE

- E. alaskensis Durham, 1957:628-629, pl. 72: figs. 6, 8. [Alaska, U.S.A.]
- E. humilis Nisiyama, 1968:100-101, pl. 16: fig. 8. [Japan.] (Chôkai Fm.)

MIDDLE PLIOCENE

E. naganoensis Morishita, 1953:220-222, fig. 3a, pl. 1: fig. 4. [Japan.] (Upper part of Ogawa Fm.)

MIOCENE

- E. gabbii Rémond kleinpelli Grant and Hertlein, 1938b:60. [U.S.A. New name for Scutella gabbi var. tenuis Kew, 1915.] (Lower San Pablo Grp.)
- E. rumoensis Hayasaka and Shibata, 1952:82-85, figs. 1a-c. [Japan.] (Tôgeshita Fm.)
- E. subtumidus Nisiyama and Hashimoto, 1950:39-42, figs. 1-3. [Japan.]

UPPER MIOCENE

E. kewi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 2: fig. 3 and plate explanation. [California, U.S.A.]

MIDDLE MIOCENE

- E. blancoensis (Kew) var. etheringtoni Weaver, 1942:6, pl. 3: figs. 7-8. [U.S.A.] (Astoria Fm.)
- E. minoensis Morishita, 1955:229-231, pl. 11: figs. 5-7. [Japan. New name for Sismondia naganoensis Morishita, 1953, invalidated.]

Genus Allaster Nisiyama

OLIGOCENE/MIOCENE

Allaster Nisiyama, 1968:127-128. Type-species: A. rotundatus Nisiyama, 1968:128-129, pl. 17: fig. 5, pl. 18: figs. 1, 4. [Japan]. (Takinoue Fm.)

Genus Astrodapsis Conrad

UPPER PLIOCENE

- A. israelskyi Jordon and Hertlein, 1926:424-425, pl. 27: figs. 4, 6. [Cedros Island, off lower California, U.S.A.]
- A. kewi Jordan and Hertlein, 1926:425–426, pl. 27: figs. 2–3. [Cedros Island, off lower California, U.S.A.]

PLIOCENE/MIOCENE

A. nipponicus Nisiyama, 1948:602-604, pl. 88: figs. 1-6, 8, 10-13. [Japan.]

UPPER MIOCENE

- A. altus Kew var. antiquus Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 15 and plate explanation. [California, U.S.A.] (Midmiddle Cierbo.)
- A. armstrongi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 14 and plate explanation. [California, U.S.A.] (Mid-middle Cierbo.)
- A. auguri Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 4 and plate explanation. [California, U.S.A.] (Early upper Briones.)

- A. blakei Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 7: fig. 7 and plate explanation. [California, U.S.A.] (Early lower Neroly.)
- A. brewerianus Rémond var. bitterensis Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 9 and plate explanation. [California, U.S.A.] (Upper Briones; doubtful lower and early middle Cierbo.)
- A. brewerianus Rémond var. emergens Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 11 and plate explanation. [California, U.S.A.] (Early lower Cierbo.)
- A. brewerianus Rémond var. junior Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 18 and plate explanation. [California, U.S.A.] (Late middle Cierbo.)
- A. cierboensis Kew branchensis Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: figs. 12–12a and plate explanation. [California, U.S.A.] (Cierbo; late upper Briones.)
- A. clarki Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 7: fig. 1 and plate explanation. [California, U.S.A.] (Late upper Cierbo.)
- A. cutleri Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 1 and plate explanation. [California, U.S.A.] (Early upper Cierbo.)
- A. davisi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 7: fig. 3 and plate explanation. [California, U.S.A.] (Late upper Cierbo.)
- A. desaixi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 5 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. diabloensis Kew var. superior Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 16 and plate explanation. [California, U.S.A.] (Late middle Cierbo.)
- A. elevatum Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 12 1/2 and plate explanation. [California, U.S.A.] (Early lower Cierbo.)
- A. englishi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 7 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. galei Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 8 and plate explanation. [California, U.S.A.] (Upper Briones to lower to middle Cierbo.)
- A. goudkoffi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 6 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)

- A. gregerseni Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 4 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. gregerseni Grant and Eaton var. fragilis Grant and Eaton in Eaton, Grant, and Allen, 1941: pl.
 6: fig. 2 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. gregerseni Grant and Eaton var. varians Grant and Eaton in Eaton, Grant, and Allen, 1941: pl.
 6: fig. 8 and plate explanation. [California, U.S.A.] (Middle and late upper Cierbo.)
- A. hertleini Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 9: fig. 2 and plate explanation. [California, U.S.A.] (Later lower Neroly.)
- A. hootsi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: figs. 11a-b and plate explanation [California, U.S.A.] (Early lower Cierbo.)
- A. isabellae Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 7: fig. 2 and plate explanation. [California, U.S.A.] (Late upper Cierbo.)
- A. johnsoni Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 3 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. johnsoni Grant and Eaton simile Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 3a and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. major Kew var. parens Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 7: fig. 6 and plate explanation. [California, U.S.A.] (Early lower Neroly.)
- A. ovalis Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 17 and plate explanation. [California, U.S.A.] (Late middle Cierbo.)
- A. perrini Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 8: fig. 6 and plate explanation. [California, U.S.A.] (Middle to lower Neroly.)
- A. quaylei Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 6: fig. 9 and plate explanation. [California, U.S.A.] (Middle to upper Cierbo.)
- A. reedi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: figs. 13–13a and plate explanation. [California, U.S.A.] (Mid-middle Cierbo.)
- A. salinasensis Richards, 1935:61-63, pl. 7: figs. 2a-c. [California U.S.A.]
- A. schencki Grant and Hertlein, 1938b:76, fig. 8. [California, U.S.A.]
- A. schencki Grant and Hertlein var. mirandaensis Grant and Eaton in Eaton, Grant, and Allen,

1941: pl. 9: figs. 4-4a and plate explanation. [California, U.S.A.] (Early upper Neroly.)

- A. schucherti Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 5: fig. 6 and plate explanation. [California, U.S.A.] (Upper Briones.)
- A. schucherti Grant and Eaton var. affinis Grant and Eaton in Eaton, Grant, and Allen, 1941: pl.
 5: fig. 10 and plate explanation. [California, U.S.A.] (Late upper Briones.)
- A. woodringi Grant and Eaton in Eaton, Grant, and Allen, 1941: pl. 8: fig. 1 and plate explanation. [California, U.S.A.] (Early lower Neroly.)

Genus Kewia Nisiyama

MIOCENE/OLIGOCENE

K. minuta Shibata, 1960:308-310, figs. 3-4, pl. 35: figs. 3-9. [Japan.]

MIDDLE MIOCENE

K. ugoensis Shibata, 1960:307-308, figs. 1-2, pl. 35: figs. 1-2. [Japan.]

OLIGOCENE

- Echinarachnius (Kewia) elongatus Nisiyama, 1940–1941:824–826, fig. 9, pl. 44: figs. 13–16. [Japan.] (Japanese Saghalien.)
- E. (K.) parvus Nisiyama, 1940–1941:822–823, pl. 44: figs. 7–12. [Japan.] (Japanese Saghalien.)

Genus Nipponaster Durham

PLIOCENE/MIOCENE

Nipponaster Durham, 1952:844-846, fig. 1d. Typespecies: Astrodapsis nipponicus Nisiyama. [Japan.]

Genus Pseudoastrodapsis Durham

In the *Treatise*, Durham (Durham et al., 1966: U482) considers *Pseudoastrodapsis* Durham an objective synonym of *Nipponaster* Durham.

PLIOCENE/MIOCENE

Pseudoastrodapsis Durham, 1953b:756. Type-species: Astrodapsis nipponicus Nisiyama. [Japan.

New name for Nipponaster Durham, 1952, not Niponaster Lambert, 1920.]

LOWER PLIOCENE

P. nitidiusculus Nisiyama, 1968:126-127, pl. 16: figs. 15-17, pl. 17: figs. 2-3, 6. [Japan.]

MIOCENE

P. intermedius Nisiyama, 1968:125-126, pl. 16: figs. 9-12, 14. [Japan.] (Kawabata Fm.)

Genus Remondella Durham

LOWER PLIOCENE

Remondella Durham, 1955:168–169, figs. 14e, 36a, 36c. Type-species: Clypeaster gabbii Rémond. [California, U.S.A.]

Genus Tenuirachnius Durham

UPPER MIOCENE

Tenuirachnius Durham, 1955:169, fig. 36b. Typespecies: Scutella gabbii Rémond tenuis Kew = Echinarachnius gabbii (Rémond) kleinpelli Grant and Hertlein. Not E. tenuis Yoshiwara. [California, U.S.A.]

Genus Vaquerosella Durham

LOWER MIOCENE

Vaquerosella Durham, 1955:166–167, figs. 16c, 21e, 21f, 36d, 36e. Type-species: Scutella andersoni Twitchell. [Baja California, U.S.A.]

Family MONOPHORASTERIDAE Lahille

Genus Karlaster Santos

MIOCENE

Karlaster Marchesini Santos, 1958:16–18, 21–22. Type-species: Karlaster pirabensis Marchesini Santos, 1958:18–19, pl. 5: figs. 1–3. [Brazil.]

Family MELLITIDAE Stefanini

Genus Mellita L. Agassiz

RECENT

- M. grantii Mortensen, 1948d:428-429, fig. 244c, pl. 15: fig. 3, pl. 59: figs. 4-5; 1948e:72. [Gulf of California, U.S.A./Mexico.]
- M. lata H. L. Clark, 1940a:437–439, pl. 60: fig. 1, pl. 61: fig. 1, pl. 62: figs. 1–2. [Eastern Pacific Ocean.]
- M. latiambulacra H. L. Clark, 1940a:439–442, pl. 62: figs. 3–6. [Caribbean Ocean.]
- M. notabilis H. L. Clark, 1947:77-78. [West coast of Central America.]
- M. platensis Bernasconi, 1947:117-118. [Argentina.]
- M. quinquiesperforata (Leske) tenuis H. L. Clark, 1940a:442-444, pl. 60: fig. 2, pl. 61: fig. 2. [Florida, U.S.A.]

UPPER PLEISTOCENE

M. kanakoffi Durham, 1961b:5-7, fig. 1d, pl. 2: fig.2. [California, U.S.A.]

UPPER MIOCENE

M. aclinensis Kier, 1963:40–45, figs. 36–41, pl. 15: figs. 1–3, tables 3–4. [Florida, U.S.A.] (Tamiami Fm.)

Genus Encope L. Agassiz

RECENT

- E. cocosi H. L. Clark, 1948:330, pl. 56: figs. 48-49. [Cocos Island, Costa Rica.]
- E. ecuadorensis H. L. Clark, 1948:333-334, pl. 59: figs. 54-55. [Ecuador.]
- E. fragilis H. L. Clark, 1948:335-336, pl. 60: figs. 56-57. [Mexico, Petatlan Bay to Tenacatita Bay.]
- E. insularis H. L. Clark, 1948:336-337, pl. 61: figs. 58-59. [Mexico, Socorro and Clarion Islands.] (Revilla Gigedo Gp.)
- E. irregularis H. L. Clark, 1948:332-333, pl. 58: figs. 52-53. [Colombia to Costa Rica.]
- E. laevis H. L. Clark, 1948:327-328, pl. 54: fig. 45, pl. 55: fig. 46. [Nicaragua.]

- E. micropora L. Agassiz var. borealis A. H. Clark, 1946:6-7, pl. 4. [Pacific Ocean.]
- E. micropora L. Agassiz galapagensis A. H. Clark, 1946:7. [Pacific Ocean.]
- E. perspectiva L. Agassiz jonesi A. H. Clark, 1946: 7-8. [Pacific Ocean.]
- E. wetmorei A. H. Clark, 1946:2-5, pls. 1-2 (upper fig.) [Pacific Ocean.]

RECENT/PLEISTOCENE

E. arcensis Durham, 1950:44, pl. 37: fig. 8, pl. 40: figs. 5-6. [California, U.S.A.]

PLEISTOCENE

E. grandis Agassiz inezana Durham, 1950:45-46, pl. 37: fig. 10, pl. 38: fig. 4. [California, U.S.A.]

PLEISTOCENE/LATE MIOCENE

E. michelini Agassiz imperforata Kier, 1963:33–36, figs. 25–30, pl. 5: fig. 1, pl. 6: figs. 3–4, table 2. [Florida, U.S.A.]

TERTIARY

E. homala Arnold and H. L. Clark, 1934:142-143, pl. 2: fig. 1. [Manchester Parish, Jamaica.]

PLIOCENE

- E. macrophora Ravenel tamiamiensis Mansfield, 1932:48, pl. 17: fig. 8. [U.S.A.]
- E. secoensis Cooke, 1961:18-19, pl. 8: fig. 1, pl. 9: figs. 1-2. [Venezuela.]

UPPER PLIOCENE

E. carmenensis Durham, 1950:44-45, pl. 37: fig. 5, pl. 40: fig. 4, pl. 44: fig. I. [California, U.S.A.]

E. shepherdi Durham, 1950:48, pl. 37: fig. 11, pl. 38: fig. 6, pl. 40: fig. 2. [California, U.S.A.]

MIDDLE PLIOCENE

E. angelensis Durham, 1950:43-44, pl. 37: fig. 15, pl. 42: figs. 1, 3-4, 10. [California, U.S.A.]

LOWER PLIOCENE

- E. chaneyi Durham, 1950:45, pl. 37: fig. 7, pl. 43: fig. 6. [California, U.S.A.]
- E. loretoensis Durham, 1950:46, pl. 37: fig. 4, pl. 41: figs. 1, 4-5. [California, U.S.A.]
- E. scrippsae Durham, 1950:47-48, pl. 37: fig. 14, pl. 41: figs. 2, 3, 6, pl. 42: figs. 2, 5-8. [California, U.S.A.]
- E. sverdrupi Durham, 1950:48-49, pl. 37: fig. 6, pl. 39: figs. 4, 6. [California, U.S.A.]

MIOCENE

- E. kugleri Jeannet, 1928b:220. [Venezuela?]
- E. peruviana Brighton, 1926a:61-69, figs. 1-7, pls. 3-5. [Peru.]
- E. vonderschmitti Jeannet, 1928b:220. [Locality?]
- E. wiedenmayeri Jeannet, 1928b:220. [Venezuela.]

MIDDLE MIOCENE

- E. kugleri Jeannet, 1928a:23-26, figs. 4-6, pl. 3: figs. 5-6. [Venezuela.] (Serie de Capadare.)
- E. vonderschmitti Jeannet, 1928a:26-28, figs. 7-8, pl. 3: figs. 7-8. [Venezuela.] (Serie de Capadare, couches d'Ojo de Agua.)
- E. wiedenmayeri Jeannet, 1928a:20-23, fig. 3, pl. 3: figs. 1-4. [Venezuela.] (Couches d'Ojo de Agua, base des Calcaires de Capadare.)

Genus Mellitella Duncan

PLIOCENE/MIOCENE

Encope (Melitella [sic]) falconensis Cooke, 1961: 19-20, pl. 8: figs. 2-4. [Venezuela.]

Family ASTRICLYPEIDAE Stefanini

Genus Astriclypeus Verrill

MIOCENE

A. manni Verrill minoensis Morishita, 1952:113, pl. 11: fig. 1. [Japan.] (Shukunohora Ss.)

LOWER MIOCENE

A. manni Verrill ambigenus Nisiyama, 1935:140-145, figs. 3a-c, pl. 8: figs. 1-3. [Japan.]

Genus Amphiope L. Agassiz

MIOCENE

- A. bioculata Desmoulin var. bentivegnae Desio, 1934:191, fig. 7, pl. 16: figs. 1a-b. [Libya.]
- A. bioculata Desmoulins var. pelatensis Fabre, 1933: 33-36. [France.]

MIDDLE MIOCENE

- A. dallonii Lambert, 1931c:88-89, pl. 3: fig. 30. [Algiers, North Africa.] (Helvetian.)
- A. labriei Lambert, 1928b:113-114; 1928e: pl. 8: fig. 3. [France.] (Helvetian.)
- A. nuragica Comaschi Caria, 1956:186, pl. 1. [Sardinia, Mediterranean Sea.] (Helvetian.)

Genus Echinodiscus Leske

RECENT

E. auritus Leske var. siamensis Mortensen, 1948d: 404–406, pl. 56: figs. 1–3, pl. 71: figs. 1, 4–5, 10–11, 13–14, 17, 22; 1948e:72. [Indo-Pacific.]

MIOCENE/OLIGOCENE

E. transiens Nisiyama, 1968:133-134, pl. 17: fig. 1. [Japan.] (Yamaga Fm.)

LOWER TERTIARY

E. ginauensis Clegg, 1933:10-11, pl. 1: figs. 4a-4b. [Persian Gulf.]

PALEOGENE

E. chikuzenensis Nagao, 1928:17, pl. 1: figs. 15-17. [Japan.]

Genus Tretodiscus Pomel

In the *Treatise*, Durham (Durham et al., 1966: U489) considers *Tretodiscus* a synonym of *Echinodiscus* Leske.

MIOCENE

T. fuchsi (Fourtau) var. giarabubensis Desio, 1929: 315-316, fig. 31, pl. 38: figs. 3-4. [Oasis of Giarabub, Libya.]

Family ABERTELLIDAE Durham

Abertellidae Durham, 1955:177. Type-genus: Abertella Durham. [Caribbean and Atlantic coast of North America.]

Genus Abertella Durham

MIOCENE

Abertella Durham, 1953a:350-351. Type-species: Scutella aberti Conrad. [U.S.A.]

MIDDLE MIOCENE

A. kewi Durham, 1957:627–628, fig. 2, pl. 72: figs. 1,7. [Mexico.]

LOWER MIOCENE

A. palmeri Durham, 1957:626-627, pl. 72: figs. 4, 9-10. [Guatemala.]

Family SCUTASTERIDAE Durham

Scutasteridae Durham, 1955:178. Type-genus: Scutaster Pack. [California, U.S.A.]

Genus Scutaster Pack

LOWER MIOCENE

- S. vaquerosensis Loel and Corey, 1932:179–180, pl.5: figs. 1a-b, 3. [California, U.S.A.] (Vaqueros Fm.)
- S. vaquerosensis Loel and Corey var. kewi Loel and Corey, 1932:180, pl. 5: fig. 4. [California, U.S.A.] (Vaqueros Fm.)

Suborder ROTULINA Durham

Family ROTULIDAE Gray

Genus Rotula Schumacher

QUATERNARY/PLIOCENE

R. orbiculus (Linné) angolensis Gonçalves and Roman, 1963:101–106, pls. 1–5. [Angola, southwest Africa.]

Genus Rotuloidea Etheridge

LOWER MIOCENE

R. vieirai Dartevelle, 1953:103-107, figs. 22-23, pl.
6: fig. 4, pl. 7: figs. 1-2, pl. 16: figs. 1-8. [Luanda, northwest Angola, southwest Africa.] (Upper Burdigalian.)

Suborder Uncertain

Family Uncertain

Genus Runa L. Agassiz

UPPER PLIOCENE

R. paromaica Argamakova, 1934:29, 41–42, fig. 14, pl. 1: fig. 7. [U.S.S.R.]

Superorder ATELOSTOMATA Zittel

Order CASSIDULOIDA Claus

Order GALEROPYGOIDA Mintz

GALEROPYGOIDA Mintz, 1968:1287–1288.

Family GALEROPYGIDAE Lambert

Genus Galeropygus Cotteau

MIDDLE JURASSIC

- G. marcoui Desor var. recincta Mercier, 1935:29-30. [France.] (Lower Bajocian.)
- G. welschi Lambert, 1935a:529-530, pl. 26: figs. 10-11. [France.] (Bathonian.)

Genus Hyboclypus L. Agassiz

MIDDLE JURASSIC

H. schlumbergeri Lambert, 1935a:531. [France, Alsace.] (Bathonian.)

Genus Laticlypus Szörényi

UPPER JURASSIC

Laticlypus Szörényi, 1966:446–447. Type-species: L. giganteus Szörényi, 1966:448–449, figs. 1–5. [Hungary.] (Oxfordian or upper Dogger.)

Genus Stegopygus Devriès and Alcaydé

Upper Cretaceous

Stegopygus Devriès and Alcaydé, 1966:21–25. Typespecies: S. langeensis Devriès, 1966:21–25, pls. 1–2. [France.] (Cenomanian.)

Family CLYPEIDAE Lambert

Genus Clypeus Leske

UPPER JURASSIC

- C. rostellus Currie, 1925:64-65, pl. 10: figs. 3a-c. [Somaliland, East Africa.] (Corallian.)
- C. wylliei Currie, 1925:63-64, pl. 10: figs. 1a-c, 2. [Somaliland, East Africa.] (Bathonian.)

Genus Crotoclypeus Pomel

In the *Treatise*, Kier (Durham et al., 1966:U499) considers *Crotoclypeus* Pomel a subjective synonym of *Clypeus* Leske.

JURASSIC

C. cottreaui Besairie and Lambert in Lambert, 1933a:11. [Madagascar, off East African coast.]

Genus Dactyloclypeus Maccagno

In the *Treatise*, Kier (Durham et al., 1966:U499) considers *Dactyloclypeus* a subjective synonym of *Clypeus* Leske.

JURASSIC

Clitopygus (Dactyloclypeus) Maccagno, 1947b:126–129, pl. 1: figs. 11, 11a-b. Type-species: Clypeus wylliei Currie. [North Africa.]

Genus Bothryopneustes Fourtau

MIDDLE JURASSIC

- B. besairiei Besairie, 1936:128, pl. 8: figs. 10-12. Madagascar, off East Africa coast.] (Upper Bathonian.)
- B. galhauseni Lambert, 1933b:58-59, pl. 2: figs. 17-19. [North Africa.] (Bathonian.)

Genus Clypeobrissus Currie

In the *Treatise*, Kier (Durham et al., 1966:U499) considers *Clypeobrissus* Currie a subjective synonym of *Bothryopneustes* Fourtau.

JURASSIC

Clypeobrissus Currie, 1925:69. (Bathonian.) Typespecies: C. somaliensis Currie, 1925:69–70, fig. 13, pl. 10: figs. 6a-c, 7. [Somaliland, East Africa.] (Corallian.) [Bathonian according to Currie (1927:411).]

Genus Pseudopygurus Lambert

UPPER JURASSIC

P. ambroggii Petitot, 1954:83-86, figs. 1-2, pl. 1: figs. 1-7. [Morocco.] (Oxfordian.)

MIDDLE JURASSIC

P. hathirae Parnes, 1961:217–222, fig. 1, pl. 1: figs.1–6. [Israel.] (Middle Callovian.)

Genus Pygurus L. Agassiz

UPPER CRETACEOUS

P lampassiformis Tzankov, 1934:204–205, 218–219, pl. 2: fig. 2. [Bulgaria.] (Santonian.)

MIDDLE JURASSIC

P. cottreaui Besairie, 1930:196-197, pl. 9: figs. 2-2a. [Madagascar, off East Africa.] (Callovian.)

MIDDLE JURASSIC

- P. depressus Agassiz var. somaliensis Currie, 1925: 65-67, fig. 11, pl. 10: figs. 4a-c. [Somaliland, East Africa.] (Bathonian/Callovian.)
- P. smelliei Currie, 1925:67-69, fig. 12, pl. 10: figs. 5a-c. [Somaliland, East Africa. According to Currie (1927:411) this species is from the Bathonian.]

Subgenus Pygurus (Pygurus)

LOWER CRETACEOUS

Pygurus (Pygurus) complanatus Tanaka, 1965: 128-129, pl. 15: figs. 1a-c, 2a-c. [Japan.]

Genus Echinopygus d'Orbigny

In the *Treatise*, Kier (Durham et al., 1966:U499) considers *Echinopygus* a subjective synonym of *Pygurus* (*Pygurus*).

UPPER CRETACEOUS

Pygurus (Echinopygus) tinocoi Beurlen, 1966: 458–459, fig. 2, pl. 1: fig.2. [Brazil.] (Cenomanian.)

LOWER CRETACEOUS

Pygurus (Echinopygus) jagueyanus Cooke, 1955:98, pl. 23: figs. 5-9. [Colombia.] (Upper Albian.)

TURASSIC

E. checchiai Maccagno, 1947b:134-136, fig. 4c, pl.1: figs. 14, 14a-b. [Somaliland, East Africa.]

Family NUCLEOLITIDAE L. Agassiz and Desor

Genus Nucleolites Lamarck

EOCENE

N. bakalovi Gočev, 1933:48–49, pl. 7: figs. 8–12. [Bulgaria.]

Cretaceous

N. wilderae Ikins, 1940:76, pl. 6: figs. 5a-c. [Texas, U.S.A.]

UPPER CRETACEOUS

- N. simpaticus Sánchez Roig, 1952d:51-52, pl. 17: figs. 7-8. [Cuba.] (Senonian.)
- N. tornacensis Smiser, 1935b:50, pl. 4: figs. 11a-d. [Belgium.] (Cenomanian.)

Genus Clitopygus Pomel

In the *Treatise*, Kier (Durham et al., 1966:U501) considers *Clitopygus* a subjective synonym of *Nucleolites* Lamarck.

UPPER CRETACEOUS

C. cantrainei Smiser, 1935b:51, pl. 4: figs. 12a-d. [Belgium.] (Cenomanian.)

MIDDLE JURASSIC

- C. basseae Lambert, 1936c:22, pl. 4: figs. 14-16. [Madagascar, off East Africa.] (Callovian.)
- C. moutieri Mercier, 1932:233–234, pl. 10: figs. 7a-b. [France.] (Upper Bathonian.)

Genus Echinobrissus Gray

In the *Treatise*, Kier (Durham et al., 1966:U501) considers *Echinobrissus* an objective synonym of *Nucleolites*.

UPPER CRETACEOUS

- E. chirakhanensis Chiplonker, 1939:237-238, pl. 25: figs. 3a-b. [India.] (Cenomanian.)
- E. cremai Checchia-Rispoli, 1921:24–25, pl. 8: figs. 10–13. [Tripoli, Libya.] (Senonian.)
- E. cubensis Weisbord, 1934:27–28, pl. 2: figs. 1–3. [Cuba.]
- E. franchii Checchia-Rispoli, 1921:25–26, pl. 8: figs. 14–17, pl. 9: fig. 4. [Tripoli, Libya.] (Senonian.)
- E. hierosolymitanus Blanckenhorn, 1925 [1924]:95, pl. 7: figs. 19-23. [Palestine, Israel.] (Turonian/Santonian.)
- E. malwaensis Chiplonker, 1939:236-237, pl. 25: figs. la-b. [India.] (Cenomanian.)
- E. rajnathi Chiplonker, 1939:238-240, pl. 25: figs. 2a-b. [India.] (Cenomanian.)

MIDDLE JURASSIC

E. pilensis Jesionek-Szymańska, 1963:349-351, 402, 413, text-pl. 5: figs. 1-5, pl. 3: figs. 3a-d. [Poland.] (Upper Bathonian.)

Genus Catopygus L. Agassiz

UPPER EOCENE

C. riveroi Sánchez Roig, 1952d:50-51, pl. 17: figs.5-6. [Cuba.]

CRETACEOUS

C. jeanneti Lambert, 1931e:303, pl. 17: figs. 19–23. [Cuba.]

UPPER CRETACEOUS

- C. conformis Desor var. conoideus Tzankov, 1934: 203, 218, pl. 1: fig. 12. [Bulgaria.] (Maestrichtian/Upper Campanian.)
- C. inflatus Regnéll, 1955:22-27, pl. 1: figs. la-d. [Sweden.] (Maestrichtian?)
- C. irregularis Smiser, 1935b:56-57, pl. 5: figs. 7a-i. [Belgium and Holland.] (Maestrichtian?)
- C. mississippiensis Cooke, 1953:15-16, pl. 5: figs. 3-6. [Mississippi, U.S.A.] (Upper Maestrichtian.)
- C. rodriguezi Lambert and Roig in Sánchez Roig, 1926:71, pl. 10: figs. 1-3. [Cuba.] (Senonian.)
- C. subcircularis Smiser, 1935b:56, pl. 5: figs. 6a-d. [Belgium and Holland.] (Maestrichtian?)
- C. zinai Airaghi, 1939:259, pl. 11: figs. 3-4. [North Africa.] (Maestrichtian?)

Genus Clypeopygus d'Orbigny

UPPER CRETACEOUS

- C. bulgaricus Tzankov, 1934:200-201, 217-218, pl. 2: figs. 1a-b. [Bulgaria.] (Maestrichtian.)
- C. dallonii Lambert, 1935c:360-361, pl. 16: figs. 4-6. [Algeria, North Africa.] (Santonian.)
- C. damujiensis Sánchez Roig, 1952d:49-50, pl. 17: fig. 3. [Cuba.] (Senonian.)
- C. habanensis Weisbord, 1934:32–34, pl. 3: figs. 1–3. [Cuba.]

Genus Oolopygus d'Orbigny

UPPER CRETACEOUS

- O. convexus Smiser, 1935b:59, pl. 6: figs. la-d. [Belgium.] (Maestrichtian.)
- Catopygus (Oolopygus) gonzalezi Sánchez Roig, 1953c:145-146, pl. 4: figs. 1-2. [Cuba.]
- O. jandrainensis Smiser, 1935b:58, pl. 5: figs. 9a-d. [Belgium.] (Maestrichtian.)

Genus Phyllobrissus Cotteau

Upper Cretaceous

P. oblongus Smiser, 1935b:53, pl. 5: figs. 2a-f. [Belgium.] (Maestrichtian.)

Lower Cretaceous

- P. artesianus Hawkins, 1926:189-191, fig. 23. [England.] (Aptian.)
- P. zulianus Cooke, 1961:6-7, pl. 1: figs. 10-12. [Venezuela.] (Aptian.)

Genus Plagiochasma Pomel

Lower Cretaceous

P. coxwellense Melville, 1952:2-5, fig. 1, pl. 1: figs. 1a-c. [England.] (Upper Aptian.)

Genus Trematopygus d'Orbigny

In the *Treatise*, Kier (Durham et al., 1966:U505) considers *Trematopygus* an objective synonym of *Plagiochasma* Pomel.

UPPER CRETACEOUS

T. novaki Zázvorka, 1952:1-4, 3 figs., pl. 1. [Bohemia.] (Lower Turonian.)

Genus Pygorhynchus L. Agassiz

UPPER OLIGOCENE

P. riveroi Sánchez Roig, 1949:125-126, pl. 17: fig. 1. [Cuba.]

UPPER EOCENE

- Cassidulus (Pygorhynchus) berryi Kellum, 1926:15, pl. 1: figs. 4-7. [North Carolina, U.S.A.]
- C. (P.) carolinensis Twitchell var. cravenensis Kellum, 1926:15, pl. 1: figs. 1-3. [North Carolina, U.S.A.]
- C. (P.) sabistonensis Kellum, 1931:51. [North Carolina, U.S.A. New name for C. berryi Kellum, 1926, not Twitchell, 1915.]

UPPER CRETACEOUS

- P. conicus Smiser, 1935b:48, pl. 4: figs. 9a-d. [Belgium.] (Maestrichtian.)
- P. ovalis Smiser, 1935b:47, pl. 4: figs. 7a-d. [Belgium.] (Maestrichtian.)

Genus Botriopygus d'Orbigny

In the *Treatise*, Kier (Durham et al., 1966:U506) considers *Botriopygus* an objective synonym of *Pygorhynchus* L. Agassiz.

UPPER CRETACEOUS

- B. jesusmariae Sánchez Roig, 1949:129–130. [Cuba.] (Senonian.)
- B. lamberti Checchia-Rispoli, 1933b:17-18, pl. 2: figs. 13-16. [North Africa.] (Maestrichtian.)
- B. millosevichi Checchia-Rispoli, 1933b:14–16, pl.2: figs. 8–12. [North Africa.] (Maestrichtian.)
- B. vinassai Serra, 1935:123-124, pl. 5: figs. 1, 1a-c. [Tripoli, North Africa.] (Maestrichtian.)

LOWER CRETACEOUS

B. royoi Lambert, 1935f:524, pl. 58: figs. 8–9. [Spain.] (Aptian.)

Family ECHINOLAMPADIDAE Gray

Genus Echinolampas Gray

RECENT

E. alexandri de Loriol var. forcipulata Mortensen, 1948c:286, fig. 272b, pl. 3: figs. 8–9, pl. 4: fig. 10, pl. 14: figs. 10–12. [Indian Ocean.]

- E. alexandri de Loriol var. sibogae Mortensen, 1948c:285-286, fig. 268c, 270b, 272c, pl. 14: figs. 2, 5-6, 13. [Malaysia.]
- E. koreana H. L. Clark, 1925a:183–184, pl. 10: figs. 4–5. [Korean Strait, eastern channel between South Korea and southwest Japan.]

TERTIARY

E. madurensis K. Martin, 1919:54, 111. [Java, Indonesia.] (Neogene.)

LOWER TERTIARY

- E. omanensis Clegg, 1933:11-12, pl. 1: figs. 5a-c. [Arabia.]
- E. peyroti Castex, 1930:33-34, pl. 2: figs. 5-7. [France.]

PLIOCENE

E. woodi Currie, 1930:176–177, pl. 16: fig. 6. [Mombasa Island, East Africa.]

MIOCENE

- E. atrophus Lambert podolicus Szörényi, 1953:34–35, 85–86, pl. 6: figs. 4, 4a–b. [Ukraine.]
- E. consolationis Sánchez Roig, 1953c:148-149, pl. 4: figs. 9-11. [Cuba.]
- E. delorenzoi Mirigliano, 1938:46-50, fig. 1, pl. 1: figs. 1-3. [Italy.]
- E. hemisphericus Lamarck var. bardiensis Desio, 1929:330-331, fig. 37, pl. 36: fig. 2. [Oasis of Giarabùb, Libya.] (Porto Bardia.)
- E. hemisphericus Lamarck var. cyrenaicus Desio, 1929:329-330, fig. 36, pl. 36: figs. la-b. [Oasis of Giarabùb, Libya.] (Porto Bardia.)
- E. mestrei Sánchez Roig, 1926:75-76, pl. 10: fig. 7. [Cuba.]
- E. paraensis Marchesini Santos, 1958:12-14, 20, pl.1: figs. 1-2, pl. 2: fig. 5. [Brazil.]
- E. percrassus Meznerics, 1941:90, pl. 2: fig. 4, pl. 3: fig. 4. [Hungary.]
- E. vadaszi Roman in Roman and Gonçalves, 1965: 309. [Hungary and Czechoslovakia. For E. (Heteroclypeus) hungaricus Vadasz, 1915, not E. hungarica Dornyai, 1913.]
- E. woodringi Durham, 1961:481, figs. 1A, 2A, pl. 68: figs. 2-3, 7. [Costa Rica.]

LOWER MIOCENE

- E. concavus Hayasaka, 1947:103-105, pl. 9: fig. 2; 1948:89-90. [China.]
- E. visedoi Lambert, 1935b:367, pl. 41: figs. 1-3. [Spain.] (Aquitanian.)

OLIGOCENE

- E. camagueyensis Weisbord, 1934:81–83, pl. 8: figs. 9–11. [Cuba.]
- E. daguini Castex, 1930:36, pl. 3: figs. 1-3. [France.] (Stampian.)
- E. rollandi? Lambert, 1931c:107, pl. 6: fig. 1. [Tunis, North Africa.]
- N. santaclarae Sánchez Roig, 1951:55-56, pl. 32: figs. 1-2. [Cuba.]

UPPER OLIGOCENE

- E. cojimarensis Sánchez Roig, 1949:152-153, pl. 19: figs. 4-5. [Cuba.]
- E. hemisphericus Lambert var. cubensis Palmer in Sánchez Roig, 1949:149-150. [Cuba. Although Palmer considered this species Lower Miocene, Brodermann (1949:321) says it is Upper Oligocene.]
- E. munozi Sánchez Roig, 1949:157–158, pl. 19: figs. 1–3. [Cuba. Brodermann (1949:321) says it is Lower to Upper Oligocene.]
- E. umbella Palmer in Sánchez Roig, 1949:151-152. [Cuba. Although Palmer cites this as Oligocene, Brodermann (1949:321) says this species is Upper Oligocene.]

OLIGOCENE OF EOCENE

E. marcaisi Lambert, 1937:92-93, pl. 2: fig. 4. [Morocco.] (Lower Lutetian.)

EOCENE

- E. altissima Arnold and H. L. Clark, 1927:47-48, pl. 9: figs. 1-4. [Jamaica, British West Indies.]
- E. anceps Chautard and Lambert var. inflata Lambert in Lambert and Jacquet, 1936:355, pl. 22: fig. 9. [Senegal, West Africa.]
- E. anceps Chautard and Lambert var. planipetala Lambert in Lambert and Jacquet, 1936:355, pl. 22: figs. 7-8. [Senegal, West Africa.]

- E. atascaderensis Brighton, 1926b:370, figs. 3a-d. pl. 26: fig. i. [Peru.] (Atascadero Ls.)
- E. bothriopygoides Lambert, 1937:87, pl. 3: figs. 9-11. [Morocco.]
- E. brachytona Arnold and H. L. Clark, 1927:49-50, pl. 9: figs. 5-6. [Jamaica, British West Indies.]
- E. cuvillieri Lambert in Lambert and Jacquet, 1936:356, pl. 22: figs. 12–14. [Senegal, West Africa.]
- E. jacqueti Lambert in Lambert and Jacquet, 1936:355-356, pl. 22: figs. 4-6. [Senegal, West Africa.]
- E. macrostoma Lambert in Lambert and Jacquet, 1936:356-357, pl. 23: figs. 1-3. [Senegal, West Africa.]
- E. marioi Roman in Roman and Gonçalves, 1965: 289–290. [Cuba. New name for Palaeolampas elongata Roig, 1953, not E. elongata Laube, 1868.]
- E. menchikoffi Lambert, 1935c:364-365, pl. 16: figs. 10-11. [Libya, North Africa.]
- E. paragoga Arnold and H. L. Clark, 1927:50-51, pl. 9: figs. 9-13. [Jamaica.]
- E. rombellipsoidalis Thirring, 1936:57-58, pl. 2: figs. 13-14. [Hungary.]
- E. strongyla Arnold and H. L. Clark, 1927:51, pl. 9: figs. 14-17. [Jamaica.]

UPPER EOCENE

- E. chiesai Airaghi, 1939:273, pl. 11: figs. 8-11. [North Africa.]
- E. nuevitasensis Weisbord, 1934:65-67, pl. 7: figs. 4-6. [Cuba.]

MIDDLE EOCENE

- E. africanus de Loriol var. tanofrei Socin, 1946: 163-171, figs. 1a-d. [North Africa.] (Priabonian/Lutetian.)
- E. barcensis Tavani, 1946:177-178, figs. 1a-b. [North Africa.] (Lower Lutetian.)
- E. bombos Nisiyama, 1968:17-19, pl. 10: figs. 10-11, pl. 11: figs. 1-6, 9. [Bonin Islands, off southeast Japan.] (Lutetian.)
- E. caranoi Checchia-Rispoli, 1950a[1945]:29–30, pl.2: figs. 2, 2a-b. [Somaliland, East Africa.]
- E. dubaleni Castex, 1930:32-34, pl. 3: figs. 4-6. [France.] (Upper to Middle Lutetian.)
- E. ellipsoidalis d'Archiac var. chalossensis Castex, 1930:32. [France.] (Lutetian.)

E. gignouxi Lambert, 1933a:35, pl. 2: fig. 25. [Madagascar, off East Africa.] (Lutetian.)

E. migiurtinus Checchia-Rispoli, 1950a[1945]:24–26, pl. 1: figs. 2, 2a–b. [Somaliland, East Africa.]

E. migliorinii Checchia-Rispoli, 1950a[1945]:28-29, pl. 2: figs. l, la-b. [Somaliland, East Africa.]

E. neuvillei Castex, 1930:34–35, pl. 2: figs. 8–10. [France.] (Middle Lutetian.)

E. parvula Lambert, 1936c:31-32, pl. 3: figs. 13-15. [Madagascar, off East Africa.] (Lower Lutetian.)

E. venzoi Roman in Roman and Gonçalves, 1965: 303. [Isle of Rhodes, southeast Aegean Sea. New name for E. rhodiensis Venzo, 1934, not E. rhodensis Laube, 1868.] (Lutetian.)

LOWER EOCENE

E. valettei Lambert, 1933a:34–35, pl. 2: figs. 23–24. [Madagascar, off East Africa.]

PALEOCENE

E. hanguensis Davies, 1943:68-69, pl. 11: figs. 2-5. [India.]

Genus Cylindrolampas Lambert

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Cylindrolampas* a subjective synonym of *Echinolampas* Gray.

MIDDLE EOCENE

Echinolampas (Cylindrolampas) migliorinii Venzo, 1934a:127–128, pl. 12: figs. 7a–c. [Isle of Rhodes, southeast Aegean Sea.] (Lutetian.)

E. (C.) rhodiensis Venzo, 1934a:128-130, pl. 12: figs. 5a-b, 6a-c. [Isle of Rhodes, southeast Aegean Sea.] (Lutetian.)

E. (C.) sandiegensis Sánchez Roig, 1953c:151-152, pl. 5: figs. 3-4. [Cuba.]

Genus Cypholampas Lambert

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Cypholampas* a subjective synonym of *Echinolampas* Gray.

MIDDLE EOCENE

Echinolampas (Cypholampas) eocenicus Sánchez Roig, 1953c:149, pl. 5: figs. 1-2. [Cuba.]

E. (C.) subnucleus Venzo, 1934a:125-126, pl. 12: figs. 3a-c. [Isle of Rhodes, southeast Aegean Sea.] (Lutetian.)

Genus Hypsoclypus Pomel

In the *Treatise*, Kier (Durham et al., 1966:U506) considers *Hypsoclypus* a subjective synonym of *Echinolampas* Gray.

MIOCENE

Echinolampas (Hypsoclypus) checchiai Roman in Roman and Gonçalves, 1965:305. [Sicily, Yugoslavia, and Ukraine. New name for Hypsoclypus lamberti Checchia-Rispoli, 1917, not E. lamberti Cotteau, 1894.]

E. (H.) deserticus Desio, 1929:332-335, pl. 37: figs. 2a-b. [Oasis of Giarabùb, Libya, North Africa.]

MIDDLE MIOCENE

H. fuentesi Sánchez Roig, 1953a:55, pl. 5, pl. 6 (pars). [Cuba.]

H. holguinensis Sánchez Roig, 1953a:54-55, pls. 3-4 (pars). [Cuba.]

Genus Isolampas Lambert

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Isolampas* a subjective synonym of *Echinolampas* Gray.

MIOCENE

Echinolampas (Isolampas) garciai Sánchez Roig, 1952c:7, pl. 3: fig. 3. [Cuba.]

LOWER MIOCENE

E. (I.) cavaionensis Venzo, 1935:229-230, pl. 17: figs. 27-28. [Italy.] (Lower Aquitanian.)

UPPER OLIGOCENE

E. (I.) globulossus Sánchez Roig, 1952c:7-8, pl. 1: figs. 7-8. [Cuba.]

Genus Macrolampas Lambert

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Macrolampas* a subjective synonym of *Echinolampas* Gray.

LOWER MIOCENE

Echinolampas (Macrolampas) gigas Sánchez Roig, 1953a:55-56, pl. 3. (pars), pls. 7-8. [Cuba.]

Genus Progonolampas Bittner

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Progonolampas* a subjective synonym of *Echinolampas* Gray.

UPPER OLIGOCENE

Echinolampas (Progonolampas) moronensis Sánchez Roig, 1953c:152-153, pl. 6: figs. 1-2. [Cuba.]

E. (P.) tenuipetalum Sánchez Roig, 1952c:6-7, pl. 3: figs. 1-2. [Cuba.]

E. (P.) torrense Sánchez Roig, 1953c:152, pl. 5: figs. 5-6. [Cuba.]

Genus Psammolampas Lambert

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Psammolampas* a subjective synonym of *Echinolampas* Gray.

OLIGOCENE

Echinolampas (Psammolampas) kugleri Jeannet, 1959:201–203, pl. 2: figs. 4-6, pl. 9. [Trinidad, West Indies.]

Genus Heteroclypeus Cotteau

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Heteroclypeus* a subjective synonym of *Echinolampas* Gray.

MIOCENE

H. wiedenmayeri Jeannet, 1928b:220. [Locality?]

MIDDLE MIOCENE

H. wiedenmayeri Jeannet, 1928a:33-34, pl. 4: figs. 8-13, pl. 6: fig. 8. [Venezuela.] (Calcaire de Capadare.)

Genus Hypsoheteroclypus Szörényi

In the *Treatise*, Kier (Durham et al., 1966:U508) considers *Hypsoheteroclypus* a subjective synonym of *Echinolampas* Gray.

MIOCENE

Hypsoheteroclypus Szörényi, 1953:76–78. Typespecies: H. doma Pomel. [Algiers, North Africa.] H. plagiosomus Lambert corsicanus Szörényi 1953: 28–29, 78–79, pl. 4: figs. 1, 1a–b. [Europe.]

Hypsoheteroclypus Szörényi 1953:33 83–84 pl.

H. vicinoconoideus Szörényi, 1953:33, 83-84, pl. 6: figs. 2, 2a-b, 3. [Europe.]

Genus Palaeolampas Bell

In the *Treatise*, Kier (Durham et al., 1966:U506) considers *Palaeolampas* a subjective synonym of *Echinolampas* Gray.

EOCENE

P. alta Arnold and H. L. Clark, 1927:52-53, pl. 10: figs. 1-3. [Jamaica, West Indies.]

P. plateia Arnold and H. L. Clark, 1927:53-54, pl. 10: figs. 4-6. [Jamaica, British West Indies.]

MIDDLE EOCENE

P. elongatus Sánchez Roig, 1953a:56-57, pl. 4 (pars). [Cuba.]

Genus Planilampas Mortensen

In the *Treatise*, Kier (Durham et al., 1966:U508) considers *Planilampas* a subjective synonym of *Echinolampas* Gray.

RECENT

Planilampas Mortensen, 1948c:297. Type-species: Echinolampas sternopetala Agassiz and Clarke. [Japan.]

UPPER OLIGOCENE

P. circularis Sánchez Roig, 1953a:57, pl. 9. [Cuba.]

Genus Progonolampas Bittner

In the *Treatise*, Kier (Durham et al., 1966:U507) considers *Progonolampas* a subjective synonym of *Echinolampas* Gray.

MIDDLE MIOCENE

P. candeli Lambert, 1931c:52, pl. 3: fig. 10. [North Africa.] (Sahelian-Tortonian.)

UPPER OLIGOCENE

P. sanchezi Lambert in Sánchez Roig, 1949:159, pl. 19: figs. 6-7. [Cuba.]

Genus Arnaudaster Lambert

LOWER CRETACEOUS

A. colombianus Cooke, 1955:96, pl. 22: figs. 1-9. [Colombia.] (Upper Albian.)

Genus Conolampas A. Agassiz

RECENT

- C. diomedeae Mortensen, 1948a:95-96. [Philippine Islands.]
- C. malayana Mortensen, 1948c:309-310, fig. 273c, pl. 7: figs. 4-6, pl. 13: figs. 11, 14; 1948e:68. [Kei Islands, Indonesia.]
- C. murrayana Mortensen, 1948b:2-3, pl. 1: figs. 1-3. [Maldive Islands, Indian Ocean off south India.]

Genus Parapygus Pomel

UPPER CRETACEOUS

P. mossoroensis Maury, 1925:500-503, pl. 24: fig. 9. [Brazil.]

Genus Plesiolampas Duncan and Sladen

PALEOCENE

P. auraduensis Kier, 1957b:857–858, pl. 104: figs.2–4. [British Somaliland, East Africa.] (Lower Auradu Series.)

P. curriae Kier, 1957b:856-857, fig. 6, pl. 103: figs. 13-14. [British Somaliland, East Africa.] (Lower Auradu Series.)

Family FAUJASIIDAE Lambert

Genus Faujasia d'Orbigny

UPPER CRETACEOUS

- F. chelonium Cooke, 1953:14, pl. 4: figs. 11-14. [Texas, U.S.A.] (Upper Maestrichtian.)
- F. eccentripora Lees, 1928:661-662, pl. 46: figs. 2a-b. [Arabia.] (Maestrichtian.)
- F. praeacutus Egorov in Dzhalilov and Egorov, 1969:109-111, figs. 3a-e. [Tadzhik, U.S.S.R. (Central Asia).] (Upper Senonian.)
- F.? transversus Smiser, 1935b:65, pl. 7: figs. la-e. [Holland.] (Maestrichtian.)

Lower Cretaceous

- F. araripensis Beurlen, 1966:456-458, fig. 1, pl. 1: figs. 1a-b. [Brazil.] (Albian?)
- F. rancheriana Cooke, 1955:97, pl. 23: figs. 10-14. [Colombia.] (Upper Albian.)

Genus Australanthus Bittner

Upper Cretaceous

Procassidulus (Australanthus) madrugensis Sánchez Roig, 1949:140-141, pl. 18: figs. 4-6. [Cuba.]

Genus Domechinus Kier

UPPER CRETACEOUS

- Domechinus Kier, 1962:141-142. Type-species: Faujasia chelonium Cooke. [Texas, U.S.A.] (Maestrichtian.)
- D. teixeirai Gonçalves in Roman and Gonçalves, 1965:270-271, figs. 2-3, pl. 2: figs. 10-11, 13. [Mozambique, southeast Africa.]

Genus Eurypetalum Kier

UPPER CRETACEOUS

Eurypetalum Kier, 1962:140. Type-species: Echinolampas faujasia Desmoulins. [Europe.] (Senonian.)

Genus Gongrochanus Kier

UPPER CRETACEOUS

Gongrochanus Kier, 1962:131-132. Type-species: Cyrtoma herscheliana M'Clelland. [India.] (Senonian.)

Genus Hardouinia Haime in d'Archiac and Haime

UPPER CRETACEOUS

- H. clypeus Cooke, 1955:98-99, pl. 25: figs. 1-5. [Alabama, U.S.A.] (Santonian.)
- H. mcglameryae Cooke, 1953:24, pl. 8: figs. 23-26. [Alabama, U.S.A.] (Upper Maestrichtian?)
- H. potosiensis Lambert, 1936e:5-6, pl. 1: figs. 2-4. [Mexico.] (Santonian?)
- H? stetsoni Stephenson, 1936:371-372, pl. 1: figs. 2-4. [North America.]
- H. waagei Holland and Feldmann, 1967:252-255, fig. 1. [North Dakota, U.S.A.] (Maestrichtian.)

Genus Lefortia Cossmann

UPPER CRETACEOUS

L. trojana Cooke, 1953:17, pl. 4: figs. 8-10. [Mississippi, U.S.A.] (Middle Maestrichtian.)

Genus Petalobrissus Lambert

UPPER CRETACEOUS

- P. burckhardti Lambert, 1936e:5, pl. 1: figs. 7-8. [Mexico.] (Lower Senonian.)
- P. (Echinobrissus) setifensis Coquand var. punica Lambert, 1931c:97, pl. 4: fig. 31. [Tunis, North Africa.] (Upper Senonian.)

Genus Pygurostoma Cotteau and Gauthier

UPPER CRETACEOUS

P. pasionensis Cooke, 1949a:1-3, fig. 1. [Central America.]

Genus Stigmatopygus d'Orbigny

UPPER CRETACEOUS

- S. lamberti Besairie, 1930:228, pl. 23: figs. 1-8. [Madagascar, off East Africa.] (Upper Campanian.)
- S. lehmani Gonçalves in Roman and Gonçalves, 1965:269–270, fig. 1, pl. 2: figs. 5–9, 12. [Mozambique, southeast Africa.]

Family ARCHIACIIDAE Cotteau and Triger

Genus Archiacia L. Agassiz

UPPER CRETACEOUS

A. lorioli Checchia-Rispoli, 1921:26–27, pl. 9: figs. 12–13. [Tripoli, Libya, North Africa.] (Cenomanian.)

Genus Gentilia Lambert

UPPER CRETACEOUS

- G. chouberti Lambert, 1937:77–78, fig. 4. [Morocco.] (Upper Cenomanian.)
- G. syriensis Kier, 1962:156–157, figs. 129–131, pl. 23: figs. 5–11. [Syria.] (Cenomanian.)

Family CASSIDULIDAE L. Agassiz and Desor

Genus Cassidulus Lamarck

RECENT

- C. delectus Krau, 1960:157-159, pls. 1-4. [Brazil.]
- C. infidus Mortensen, 1948c:215, pl. 2: figs. 6-8; 1948e:67. [Tropical Atlantic.]
- C. mitis Krau, 1954:455-475, pls. 1-5, pl. 6: fig. 21. [Brazil.]

TERTIARY

- C. platypetalus Arnold and H. L. Clark, 1934:144, pl. 1: figs. 3-5. [Jamaica, British West Indies.]
- C. sphaeroides Arnold and H. L. Clark, 1934:144–145, pl. 1: figs. 6-8. [Jamaica, British West Indies.]

UPPER OLIGOCENE

C. rojasi Sánchez Roig, 1953c:146–147, pl. 4: figs. 3–5. [Cuba.]

UPPER EOCENE

C. ericsoni Fischer, 1951:65-68, figs. 6-8, pl. 2: figs. 1-2, pl. 3: figs. 1-3. [U.S.A.]

Cassidulus (Cassidulus) trojanus Cooke, 1942:32, pl. 2: figs. 22-25. [U.S.A.]

MIDDLE EOCENE

- C. mestieri Kier, 1966b:10, fig. 16, pl. 1: figs. 9-11. [Barbados, Lesser Antilles, West Indies.] (Upper Scotland Fm.)
- C. senni Kier, 1966b:8-9, figs. 14-15, pl. 1: figs. 6-8. [Barbados, Lesser Antilles, West Indies.] (Upper Scotland Fm.)

PALEOCENE

C. faberi Ravn, 1927:327-329, pl. 2: figs. 4-6, 7a-d. [Denmark.] (Danian.)

UPPER CRETACEOUS

- C. cubensis Weisbord, 1934:28-30, pl. 2: figs. 9-11. [Cuba.]
- C. emmonsi Stephenson, 1928:7-10, pl. 3: figs. 3-8, pl. 4. [North Carolina, U.S.A.] (Maestrichtian/Upper Senonian.)
- C. kellumi Stephenson, 1928:5-7, pls. 1-2, pl. 3: figs. 1-2. [North Carolina, U.S.A.] (Maestrichtian/Upper Senonian.)
- C. mercedensis Anderson, 1958:85-86, pl. 6: figs. 2a-b. [California, U.S.A.]
- C. taylori Warren, 1926:11, pl. 1: figs. 10-13. [Alberta, Canada.] (Birch Lake Member, Belly River Group.)

Genus Glossaster Lambert

In the *Treatise*, Kier (Durham et al., 1966:U514) considers *Glossaster* a subjective synonym of *Cassidulus* Lamarck.

UPPER CRETACEOUS

G. welschi Gauthier in Lambert, 1931c:74-75, pl. 3: figs. 18-19. [Algiers, North Africa.] (Maestrichtian/Upper Senonian.)

Genus Nucleopygus L. Agassiz

MIOCENE

N. lebescontei Tournouer var. ancegavensis Cottreau, 1933:545-546, pl. 27: figs. 4, 4a-b. [France.]

UPPER EOCENE

N. tamarindensis Sánchez Roig, 1952d:54, pl. 16: figs. 2-3. [Cuba.]

UPPER CRETACEOUS

- N. atlanticus Kossmat brevior Dartevelle, 1953:51-52, pl. 5: figs. 2, 4-5, 10-11, 13. [Belgian Congo, south Central Africa.] (Turonian/Cenomanian.)
- N.? gallagheri Richards, 1962:200-201, pl. 92: figs. 3-4. [New Jersey, U.S.A.] (Navesink Fm., Maestrichtian.)
- N. geayi Cottreau, 1922a:121-122, pl. 2: figs. 10, 10a-b. [Madagascar, off East Africa.] (Maestrichtian/Danian.)
- N. kailensis Gauthier in Lambert, 1931c:30, pl. 1: figs. 29-30. [North Africa.] (Cenomanian.)
- N. sanctaluciae Sánchez Roig, 1952d:52-53, pl. 16: figs. 4-5. [Cuba.]

Lower Cretaceous

N. piveteaui Lambert, 1931c:64-65, pl. 7: figs. 5-7. [Algiers, North Africa.] (Neocomian.)

Genus Rhyncholampas A. Agassiz

PLEISTOCENE/PLIOCENE

R. ayresi Kier, 1963:45-48, figs. 43-46, pl. 16: figs. 3-6. [Florida, U.S.A.] (Caloosahatchee.)

UPPER OLIGOCENE

R. cervantesi Sánchez Roig, 1949:145, pl. 36: figs. 5-6. [Cuba.]

LOWER OLIGOCENE

R. rodriguezi Lambert and Roig in Sánchez Roig, 1926:72, pl. 10: figs. 4-6. [Cuba.]

MIDDLE EOCENE

R. magnei Castex, 1947:32-33, pl. 2: figs. 5-7. [France.] (Lutetian.)

LOWER EOCENE

R. anceps Lambert, 1933a:33-34, pl. 2: figs. 17-19. [Madagascar, off East Africa.]

R. tuderi Lambert, 1937:85–86, pl. 3: figs. 6-8. [Morocco.]

Genus Anisopetalus Arnold and Clark

In the *Treatise*, Kier (Durham et al., 1966:U515) considers *Anisopetalus* a subjective synonym of *Rhyncholampas* A. Agassiz.

EOCENE

Anisopetalus Arnold and H. L. Clark, 1927:44-45. Type-species: A. ellipticus H. L. Clark in Arnold and H. L. Clark, 1927:45-46, pl. 6: figs. 16-20. [Jamaica, British West Indies.]

MIOCENE

A. oliveirai Marchesini Santos, 1958:11-12, 19-20, pl. 2: figs. 1-4. [Brazil.]

UPPER EOCENE

- A. brodermanni Sánchez Roig, 1952c:9-10, pl. 4: figs. 1-3. [Cuba.]
- A. caobaense Sánchez Roig, 1952c:10-11, pl. 5: figs. 1-3. [Cuba.]
- A. cookei Sánchez Roig, 1952c:8-9, pl. 4: fig. 4, pl. 5: figs. 4-5. [Cuba.]

Genus Galerolampas Cotteau

In the Treatise, Kier (Durham et al., 1966:U515) considers Galerolampas a subjective synonym of Rhyncholampas A. Agassiz.

MIDDLE EOCENE

G. murardi Gorodiski, 1951:323-325, pl. 1: figs. 8-9c. [Senegal, West Africa.] (Lutetian.)

LOWER TERTIARY

Cassidulus (Galerolampas) fontis Cooke, 1942:35, pl. 2: figs. 26-29. [U.S.A.] (Lower Eocene or Paleocene.)

Genus Rhynchopygus d'Orbigny

PLIOCENE

Cassidulus (Rhynchopygus) evergladensis Mansfield, 1932:48, pl. 18: figs. 1-10. [U.S.A. Kier (1962:180) placed this species with Rhyncholampas.]

EOCENE

R. matleyi Hawkins in Arnold and H. L. Clark, 1927:54-55, 79-80, pl. 11: figs. 3-4, pl. 22: figs. 6-8. [Jamaica, British West Indies.]

R. peruvianus Brighton, 1926b:366-369, figs. 2a-g, pl. 26: figs. a-d. [Peru.] (Atascadero Ls.)

R. punctatus Arnold and H. L. Clark, 1927:55-56, pl. 11: figs. 5-7. [Jamaica, British West Indies.]

UPPER EOCENE

C. (R.) zanolettii Sánchez Roig, 1952d:55-56, pl. 16: figs. 6-7. [Cuba.]

UPPER CRETACEOUS

R. macari Smiser, 1935b:63, pl. 6: figs. 6a-e. [Holland.] (Maestrichtian.)

Genus Paralampas Duncan and Sladen

In the *Treatise*, Kier (Durham et al., 1966:U515) considers *Paralampas* a subjective synonym of *Rhynchopygus* d'Orbigny.

EOCENE

P. besairiei Lambert, 1929:193, figs. 3-4. [Madagascar, off East Africa. Figured in Besairie and Lambert, 1930:114, pl. 10: figs. 5-6.]

P. conceptionis Sánchez Roig, 1953c:153-154, pl. 6: fig. 5. [Cuba.]

UPPER EOCENE

Cassidulus (Paralampas) globosus Fischer, 1951:71-72, figs. 8-10, pl. 4: figs. 1-5. [U.S.A.]

Genus Procassidulus Lambert

In the *Treatise*, Kier (Durham et al., 1966:U515) considers *Procassidulus* a subjective synonym of *Rhynchopygus* d'Orbigny.

RECENT

P. malayanus Mortensen, 1948c:223-226, figs. 203-209, pl. 1: figs. 27-30, pl. 11: figs. 1, 3, 6, 10, 14-15, 18-20; 1948e:67. [Kei Islands, Indonesia.]

LOWER MIOCENE

P. jeanneti Sánchez Roig, 1949:137, pl. 17: figs. 2–3. [Cuba.]

OLIGOCENE

P. zinai Airaghi, 1939:274, pl. 11: fig. 12. [North Africa.]

UPPER OLIGOCENE

- P. avilensis Palmer in Sánchez Roig, 1949:134-135, pl. 4: figs. 6-8. [Cuba.]
- P. brodermanni Sánchez Roig, 1949:135, pl. 17: figs.
 6-7. [Cuba. Although Sánchez Roig says it is Eocene, Brodermann (1949:326) places this species in the Upper Oligocene.]
- P. circularis Palmer in Sánchez Roig, 1949:139–140, pl. 17: figs. 4–5. [Cuba.]
- P. echevarriai Sánchez Roig, 1953c:145, pl. 4: fig. 8. [Cuba.]
- P. habanensis Sánchez Roig, 1949:138, pl. 4: fig. 5. [Cuba. Although Sánchez Roig says it is Oligocene, Brodermann (1949:326) says this species is Upper Oligocene.]

EOCENE

- P. apianus Besairie and Lambert, 1930:113, pl. 9: figs. 4-6. [Madagascar, off East Africa.]
- P. lambayensis Lambert in Lambert and Jacquet, 1936:351-352, pl. 22: figs. 1-3. [Senegal, West Africa.]

UPPER EOCENE

P. mooni Lambert, 1931d:202, pl. 5: figs. 8–11. [Egypt.] (Priabonian.)

PALEOCENE

P. gliberti Smiser, 1935b:60, pl. 6: figs. 3a-d. [Belgium.] (Montian.)

UPPER CRETACEOUS

- Lefortia (Procassidulus) barrabei Besairie, 1930:228-229, pl. 24: figs. 4, 4a, 5. [Madagascar, off East Africa.] (Upper Senonian, probably Campanian.)
- P. basseae Lambert, 1936c:24-25, pl. 2: figs. 13-15. [Madagascar, off East Africa.] (Upper Campanian.)
- P. clericii Checchia-Rispoli, 1933b:18-21, fig. 8, pl.1: fig. 16. [North Africa.] (Maestrichtian.)
- P. luacesi Sánchez Roig, 1949:135–136, pl. 18: figs.1–3. [Cuba.]
- P. minutus Sánchez Roig, 1949:133, pl. 17: figs. 8-11. [Cuba.]
- P. neltneri Lambert, 1931c:31–32, pl. 1: figs. 26–28. [North Africa.] (Cenomanian.)
- P. simpatiae Sánchez Roig, 1949:138–139, pl. 17: figs. 12–13. [Cuba.]

Family CLYPEOLAMPADIDAE Kier

Clypeolampadidae Kier, 1962:187. [Europe and India.]

Genus Clypeolampas Pomel

UPPER CRETACEOUS

C. toroensis Sánchez Roig, 1952d:48-49, pl. 16: fig. 1. [Cuba.] (Senonian.)

Family PLIOLAMPADIDAE Kier

PLIOLAMPADIDAE Kier, 1962:192.

Genus Pliolampas Pomel

UPPER MIOCENE

P. dilatatus Callegari, 1930:10–11, figs. 17–17a. [Italy.] (Helvetian.)

EOCENE

P. trevisani Checchia-Rispoli, 1936:306-307, pl. 16: figs. 3, 3a-b, pl. 17: fig. 6. [Sicily, southwest of Italy.]

MIDDLE EOCENE

P. lorioli (Fourtau) var. excentrica Gorodiski, 1951: 325–327, pl. 1: figs. 2–4. [Senegal, West Africa.] (Lutetian.)

Genus Breynella Gregory

In the *Treatise*, Kier (Durham et al., 1966:U517) considers *Breynella* a synonym of *Pliolampas* Pomel.

UPPER CRETACEOUS

B. baixadoleitensis Maury, 1934a:153-154, pl. 15: figs. 2-3. [Brazil, Rio Grande do Norte.] (Probably Turonian.)

Genus Eurhodia Haime

MIOCENE

E. falconensis Jeannet, 1928b:220. [Venezuela.]

MIDDLE MIOCENE

E. falconensis Jeannet, 1928a:32-33, fig. 10, pl. 4: figs. 2-7, pl. 6: fig. 7. [Venezuela.] (Couches d'Ojo de Agua, serie Capadare.)

EOCENE

E. corralesi Sánchez Roig, 1951:61, pl. 33: figs. 4-5. [Cuba.]

MIDDLE EOCENE

E. freneixae Roman and Gorodiski, 1959:21-22, pl.2: figs. 5-9. [Senegal.] (Upper Lutetian.)

LOWER EOCENE

E.? elbana Cooke, 1942:36–37, pl. 5: figs. 5–8. [U.S.A.]

PALEOCENE

E. morrisi (d'Archiac) var. salsensis Davies and Pinfold, 1937:62-63, fig. 4c, pl. 7: figs. 20, 25. [India.] (Upper Khairabad Ls. Ranikot.)

Genus Gitolampas Gauthier

MIDDLE MIOCENE

G. sendaica Nisiyama, 1968:22-24, fig. 26a, pl. 30: figs. 3, 5-7. [Japan.] (Moniwa Fm.)

UPPER CRETACEOUS

- G. lamberti Checchia-Rispoli, 1921:18-20, pl. 7: figs. 5-24, pl. 9: fig. 3. [Tripoli, Libya.] (Senonian.)
- G. zuffardii Checchia-Rispoli, 1921:20–21, figs. 1–2, pl. 7: figs. 5–24, pl. 9: fig. 3. [Tripoli, Libya.] (Senonian.)

Genus Gitolampopsis Checchia-Rispoli

In the *Treatise* Kier (Durham et al., 1966:U518) considers this to be a subjective synonym of *Gitolampas*.

UPPER CRETACEOUS

Gitolampopsis Checchia-Rispoli, 1921:18–20. Typespecies: Gitolampas lamberti Checchia-Rispoli. [Tripoli, Libya.] (Senonian.)

Genus Echanthus Cooke

In the *Treatise*, Kier (Durham et al., 1966:U518) considers *Echanthus* a subjective synonym of *Gitolampas* Gauthier.

PALEOCENE

Echanthus Cooke, 1942:37. Type-species: E. georgiensis Twitchell. (Clayton Fm.)

Genus Ilarionia Dames

EOCENE

I. defiorei Checchia-Rispoli, 1936:305-306, pl. 16: figs. 2-2a, pl. 17: figs. 7-7a. [Sicily, southwest of Italy.]

MIDDLE EOCENE

- I. jeanneti Castex, 1947:33, pl. 2: figs. 8-11. [France.] (Lutetian.)
- I. sindensis Duncan and Sladen madagascariensis Cottreau, 1935:262-264, pl. 1: figs. 5, 5a-c. [Madagascar, off East Africa.] (Lower Lutetian.)

Genus Neocatopygus Duncan and Sladen

MIDDLE EOCENE

N. caobaense Sánchez Roig, 1953c:154, pl. 6: figs. 3-4. [Cuba.]

Genus Santeelampas Cooke

MIDDLE EOCENE

Santeelampas Cooke, 1959:61. Type-species: Catopygus oviformis Conrad. [South Carolina, U.S.A.]

Genus Studeria Duncan

UPPER OLIGOCENE

S. rositae Sánchez Roig, 1953c:147, pl. 4: figs. 6-7. [Cuba.]

Genus Tristomanthus Bittner

In the *Treatise*, Kier (Durham et al., 1966:U520) considers *Tristomanthus* Bittner a subjective synonym of *Studeria* Duncan.

PLIOCENE

- Pliolampas (Tristomanthus) elevatus Martin in Jeannet and Martin, 1937:268-269, figs. 48a-c. [Dutch East Indies, West Pacific Ocean.]
- P. (T.) javanus Jeannet in Jeannet and Martin, 1937:267-268, figs. 46a-d, 47a-c. [Dutch East Indies, West Pacific Ocean.]

MIOCENE

- T. podjarkovi Szörényi, 1953:25-26, 74-75, pl. 4: figs. 4, 4a-b. [Ukraine.]
- T. podolicus Szörényi, 1953:26, 75-76, pl. 6: figs. 6, 6a-b. [Ukraine.]

Genus Termieria Lambert

PALEOCENE

Termieria Lambert, 1931c:30-31. Type-species: T. henrici Lambert, 1931c:31, pl. 1: figs. 31-35. [North Africa, Morocco.] (Danian.)

Genus Zuffardia Checchia-Rispoli

UPPER CRETACEOUS

Z. cerullii Checchia-Rispoli, 1933a:4–8, pl. 1: figs. 1–4. [North Africa.] (Maestrichtian.)

Family APATOPYGIDAE Kier

Genus Apatoypgus Hawkins

RECENT

A. occidentalis H. L. Clark, 1938:425-428, fig. 36, pl. 28: figs. 1-3. [Western Australia.]

Family Uncertain

Genus Astropygaulus Checchia-Rispoli

UPPER CRETACEOUS

Astropygaulus Checchia-Rispoli, 1945[1943]:82-85. Type-species: A. trigonopygus Checchia-Rispoli, 1945[1943]:82-85, figs. 1-2, pl. 2: figs. 1-2. [Somaliland, East Africa.] (Cenomanian.)

Genus Centropygus Ebray

MIDDLE JURASSIC

C. pictaviensis Lambert, 1935a:530-531, 1 fig., pl. 26: figs. 12-15. [France.] (Callovian.)

Genus Echinanthus Leske

EOCENE

E.? varnensis Gočev, 1933: 52-53, fig. 9, pl. 7: figs. 1-2. [Bulgaria.]

MIDDLE EOCENE

E. neuvillei Castex, 1930:29-30, pl. 1: figs. 9-12. [France.] (Upper Lutetian.)

E. reguanti Roman and Villatte in Reguant, Roman and Villatte, 1970:903-905, figs. 4B, 5, pl. 33: figs. 9-11. [N 4 km from the road to Sau, province of Barcelone, Spain.] (Lower Biarritzian.)

LOWER EOCENE

E. basseae Lambert, 1936c:31, pl. 3: figs. 27-30. [Madagascar, off East Africa.] (Lower Lutetian.)

UPPER CRETACEOUS

E. pumilus Duncan and Sladen var. abiadensis Lees, 1928:662, pl. 46: fig. 3. [Arabia.] (Maestrichtian.) These species probably should be referred to Gitolampas. See Kier (1962:226) for a discussion of Echinanthus.

Genus Lovenilampas Maury

UPPER CRETACEOUS

Lovenilampas Maury, 1934b:3-5. Type-species: Lovenia baixadoleitensis Maury, 1934b:3-5, fig. 1. [Brazil.]

Order HOLASTEROIDA Durham and Melville

Family COLLYRITIDAE d'Orbigny

Subfamily COLLYRITINAE Beurlen

Collyritinae Beurlen, 1934:63–64, fig. 8. [Europe.]

Genus Collyrites Desmoulins

UPPER JURASSIC

C. segestina Checchia-Rispoli, 1940b:23-25, fig. 1. [Sicily, southwest of Italy.]

MIDDLE JURASSIC

C. tuarkyrensis Poretskaya, 1968b:286-287, figs. 37-38, pl. 67: figs. 1a-e. [Nedr, U.S.S.R.] (Callovian.)

Genus Cardiopelta Pomel

UPPER JURASSIC

Collyrites (Cardiopelta) bicordata (Leske) var. baltica Beurlen, 1934:91. [Europe.] (Oxfordian.)

C. (C.) capistrata Goldfuss mut. antecedens Beurlen, 1934:92, fig. 14c. [Europe.] (Oxfordian.)

MIDDLE JURASSIC

C. (C.) bicordata (Leske) primitiva Jesionek-Szymańska, 1963:375–378, 403, 414, text-pl. 11: figs. 1–9, pl. 6: figs. 2a–c, 3. [Poland.] (Upper Callovian.)

Genus Orbignyana Ebray

MIDDLE JURASSIC

O. quenstedti Beurlen, 1934:49-50, fig. 2c. [Europe.] (Bathonian.)

Genus Pygorhytis Pomel

MIDDLE JURASSIC

P. ovalis Leske var. dimota Vialov, 1930:868. [Asiatic Russia.] (Callovian.)

P. ringens Agassiz wiekensis Jesionek-Szymańska, 1963:362-363, 403, 414, text-pl. 7: figs. 1-5, pl. 5: figs. 2a-d. [Poland.] (Upper Callovian.)

Order DISASTEROIDA Mintz

DISASTEROIDA Mintz, 1968:1287-1288.

Family DISASTERIDAE A. Gras

Genus Disaster Agassiz

LOWER CRETACEOUS

D. dallonii Lambert, 1931c:62, pl. 3: fig. 1. [Algiers, North Africa.] (Berriasian.)

Genus Collyropsis Gauthier

UPPER JURASSIC

Collyropsis (Collyropsis) Beurlen, 1934:130-131. Type-species: Collyropsis (Collyropsis) carinata Leske. [Europe.]

Genus Procollyropsis Beurlen

In the Treatise, Wagner and Durham (Durham et al., 1966:U527) consider Procollyropsis a subjective synonym of Collyropsis.

MIDDLE JURASSIC

Collyropsis (Procollyropsis) Beurlen, 1934:129. Type-species: Disaster platypygus Quenstedt. [Europe.]

Family ACROLUSIIDAE Mintz

ACROLUSIIDAE Mintz, 1968:1278. Type-genus: Acrolusia Lambert.

Family TITHONIIDAE Mintz

TITHONIIDAE Mintz, 1968:1278.

Genus Corthya Pomel

UPPER EOCENE

C. ambayraci Lambert, 1924a:5-7, figs. 1-3. [France.] (Bartonian.)

Genus Oustechinus Lambert

UPPER JURASSIC

Oustechinus Lambert, 1931c:92-93. Type-species: O. basseae Lambert, 1931c:93, fig. 7, pl. 3: figs. 31-32. [Tunis, North Africa.] (Tithonian.)

Genus Tithonia Pomel

Lower Cretaceous

T. arctica Jeannet, 1955:553-555, fig. 1, pl. 25: figs. 1-5. [Greenland.] (Valanginian.)

UPPER JURASSIC

T. houdardi Lambert, 1933c:179-180, pl. 7: fig. 18. [France.] (Oxfordian.)

T. solignaci Lambert, 1931c:92, fig. 6, pl. 3: fig. 34. [Tunis, North Africa.] (Tithonian.)

MIDDLE JURASSIC

T. blondeti Démoly and Lambert in Démoly, 1928: 140, pl. 1: figs. 4-8. [France.] (Bathonian.)

Metaporinus (Tithonia) praeconvexa Jesionek-Szymańska, 1963:390–395, 403, 414, text-pl. 1: figs. 2, 9, text-pl. 13: figs. 4-12, text-pl. 14: figs. 1-9, pl. 7: figs. 2a-d, 3a-b. [Poland.] (Upper Callovian.)

Family HOLASTERIDAE Pictet

Genus Holaster Agassiz

UPPER CRETACEOUS

H. feralis Cooke, 1953:26-27, pl. 9: figs. 1-5, pl. 10: fig. 7, [Colorado, U.S.A.] (Turonian.)

H. feruglioi Melinossi, 1935:32-39, figs. 1a-b, 2. [South America.]

H. hermitei Vidal, 1921:12-13, pl. 2: fig. 3, pl. 3: fig. 3, pl. 4: fig. 8. [Spain.] (Santonian.)

H. lorioli Blanckenhorn, 1925[1924]:96. [Palestine,

Israel.] (Upper Cenomanian.)

H. marinellii Stefanini, 1928:177–178, pl. 20: figs. 10a-f. [Karakorum, Mongolia.] (Cenomanian.)

H. mortenseni Bernasconi, 1954:397-400, pl. 1. [Tierra del Fuego, Argentina.] (Senonian?)

LOWER CRETACEOUS

- H. clypeatulus Nisiyama, 1950b:35-36, figs. 1-3, pl. 4: figs. 8-9. [Japan.] (Albian/Aptian.)
- H. lerichei Dartevelle, 1953:131-135, fig. 40, pl. 9: figs. 1-4. [Angola, southwest Africa.] (Upper Albian.)
- H. vanhoepeni Besairie and Lambert, 1930:115-116, pl. 10: figs. 1-2. [Zululand, East Africa.] (Albian.)

Genus Basseaster Lambert

UPPER CRETACEOUS

Basseaster Lambert, 1936c:25. Type-species: B. rostratus Lambert, 1936c:25, pl. 3: figs. 8–12, pl. 4: fig. 10. [Madagascar, off East Africa.] (Maestrichtian.)

Genus Cardiaster Forbes

UPPER CRETACEOUS

- C. deciper Cooke, 1953:27-28, pl. 10: figs. 3-6. [Arkansas, U.S.A.] (Lower Maestrichtian.)
- C. hilli Cooke, 1958:50–51, pl. 7: figs. 9–14. [New Jersey, U.S.A.]
- C. leonensis Stephenson, 1941:62-63, pl. 5: figs. 4-7, pl. 6: figs. 5-6. [U.S.A.] (Navarro Group. Maestrichtian.)
- C. moabiticus Blanckenhorn, 1925[1924]:96, pl. 7: fig. 24. [Palestine, Israel.] (Santonian.)
- C. palmeri Sánchez Roig, 1949:172-173, pl. 5: figs. 3-5. [Cuba.]
- C. perorientalis Nisiyama, 1968:151-152, pl. 18: figs. 6-7. [Japan.] (Maestrichtian/Senonian.)

LOWER CRETACEOUS

C. kelleri Haughton, 1924:99-100. [Angola, southwest Africa. See Haughton (1925:279-280) for English translation.] (Upper Albian.)

Genus Echinocorys Leske

PALEOCENE

- E. legindensis Wind, 1959:125, pl. 2: figs. 1-6. [Denmark.] (Danian.)
- E. obliquus Ravn assymmetrica Kongiel, 1935: 205(37), pl. 7: figs. 1a-b, 2a-c, 3. [Poland.] (Danian.)
- E. obliquus Ravn lata Kongiel, 1935:204(36), pl. 6: figs. 4a-c. [Poland.] (Danian.)
- E. obliquus Ravn var. recta Kongiel, 1935:205(37), pl. 7: figs. 4a-d. [Poland.] (Danian.)
- E. pentagonalis Kongiel, 1949:32-34, figs. 34-61, pl. 17: figs. 8-11, pl. 18: figs. 1-8. [Poland.] (Danian.)
- E. semiglobosus Kongiel, 1949:29-30, figs. 34-61, pl. 15: fig. 12, pl. 16: figs. 1-4. [Poland.] (Danian.)

CRETACEOUS

- E. ovatus Leske var. cubensis Sánchez Roig, 1926: 88-89, pl. 11: fig. 6, pl. 12: fig. 4. [Cuba.]
- E. sulcatus Goldfuss hannae Köster, 1950:440-452, figs. 1a-e, 2a-e, 3a-c, 5-6. [Germany.]

Upper Cretaceous

- E. belgicus Lambert var. pruvosti Smiser, 1935a:30, pl. 2: figs. 2a-d. [Belgium.] (Senonian.)
- E. darderi Lambert, 1935b:363-364, pl. 42: figs. 1-2. [Spain.] (Maestrichtian.)
- E. edhemi Böhm, 1927:193–194, pl. 12: fig. 1a. [Bithynia, Asia Minor.] (Senonian.)
- E. gravesi Desor var. rossiensis Kongiel, 1936b: 2-6, pl. 1: figs. 3a-b, pl. 2: figs. 1-4, pl. 3: figs. 1-4. [Poland.]
- E. katsharavai Tzaghareli, 1949:179-180, 259-260, fig. 1, pl. 13: figs. 1-3. [Georgia, U.S.S.R.]
- E. lamberti Smiser, 1935a:32-33, figs. 14a-b, pl. 2: figs. 3a-d, 4a-d. [Belgium.] (Senonian.)
- E. mamontoffi Charles in Lambert and Charles, 1937:386-388, pl. 9: figs. 9-11. [Asia Minor.]
- E. ogormani Lambert in Lambert and Charles, 1937:393, fig. 6. [France.]
- E. ovatus Leske cubensis Sánchez Roig, 1949:175–176, pl. 4: figs. 3-4. [Cuba.]
- E. ovatus Leske villarensis Sánchez Roig, 1949:176, pl. 21: figs. 1-2. [Cuba.]

- E. pustolosus (Leske) daniensis Wind, 1959:127–128. [Denmark.] (Senonian.)
- E. renngarteni Moskvin, 1959:260-261, fig. 65, pl. 10: figs. 2a-c. [Caucasus, U.S.S.R.]
- E. sumbaricus Djabarov, 1968:288–289, fig. 39, pl. 67: figs. 2a-e. [Nedr, U.S.S.R.]
- E. tenuituberculatus Leymerie var. madagascariensis Besairie, 1930:227, pl. 25: figs. 1, 1a-b. [Madagascar, off East Africa.] (Lower Maestrichtian.)
- E. yoloensis Anderson, 1958:85, pl. 6: figs. 1a-d. [California, U.S.A.] (Lower Senonian.)

Genus Ananchites Lamarck

Wagner and Durham (Durham et al., 1966:U528) consider *Ananchites* a subjective synonym of *Echinocorys* Leske.

Cretaceous

A. argentinus de Saez, 1930:58-60, 2 figs. [Argentine. De Saez refers to the genus as Ananchytes.]
A. austriaca Traub, 1938:39-40, pl. 1: figs. 8a-c. [Germany.]

Genus Galeola Quenstedt

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U528) consider *Galeola* a subjective synonym of *Echinocorys* Leske.

UPPER CRETACEOUS

G. papillosa Quenstedt basiplana Ernst, 1970:55, fig. 6. [Northwest Germany.] (Upper Campanian.)

Genus Spatagoides Bayle

UPPER CRETACEOUS

- S. aichinoi Checchia-Rispoli, 1931:3-6, fig. 1, pl. 1: figs. 4-6. [Cirenaica, East Libya.] (Maestrichtian.)
- S. martellii Checchia-Rispoli, 1931:7-11, fig. 2, pl. 1: figs. 1-3. [Cirenaica, East Libya.] (Maestrichtian.)
- S. striatoradiatus Leske var. conicus Smiser, 1935b: 71, pl. 8: fig. lg. [Holland.] (Maestrichtian.)
- S. striatoradiatus Leske var. depressus Smiser, 1935b: 71-72, pl. 8: fig. 1h. [Holland.] (Maestrichtian.)

- S. striatoradiatus Leske var. elevatus Smiser, 1935b: 71, pl. 8: fig. le. [Holland.] (Maestrichtian.)
- S. tripolitanus Checchia-Rispoli, 1931:11-14, fig. 3, pl. 1: figs. 7-8. [Cirenaica, East Libya.] (Maestrichtian.)

Genus Galeaster Seunes

PALEOCENE

- G. carinatus Ravn, 1927:342-343, pl. 2: figs. 9a-d. [Denmark.] (Danian.)
- G. dagestanensis Poslavskaia and Moskvin, 1960: 59-60, fig. 9, pl. 2: figs. 6a-e. [Southern U.S.S.R.]

Upper Cretaceous

G.? muntshiensis Tzaghareli, 1949:183-184, 260-261, fig. 2, pl. 13: figs. 6-8. [Georgia, U.S.S.R.]

Genus Hagenowia Duncan

UPPER CRETACEOUS

- H. blackmorei Wright and Wright, 1949:467–470, figs. 14–16. [England.] (Senonian.)
- H. infulasteroides Wright and Wright, 1949:470-472, figs. 17-18. [England.] (Senonian.)

Genus Martinosigra Nielson

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U530) consider this genus an objective synonym of *Hagenowia* Duncan.

UPPER CRETACEOUS

Martinosigra Nielsen, 1942:163. Type-species: Cardiaster rostratus Forbes. [Europe.] (Senonian.)
M. elongata Nielsen, 1942:163–166, pl. 2: fig. 2. [Denmark.] (Senonian.)

Genus Hemipneustes Agassiz

NEOGENE

H. striatoradiatus d'Orbigny var. giganteus Tzankov, 1930:27-29, 71, fig. 1, pl. 1: figs. 1-3. [Bulgaria.] (Aturien.)

UPPER CRETACEOUS

- H. nicklesi Vidal, 1921:10-11, figs. 1-2, pl. 2: fig. 1, pl. 3: fig. 1. [Spain.] (Campanian.)
- H. perrieri Cottreau, 1935:261-262, pl. 1: figs. 4, 4a-b. [Madagascar, off East Africa.] (Maestrichtian.)
- H. sardanyolae Vidal, 1921:11-12, figs. 3-4, pl. 2: fig. 2, pl. 3: fig. 2. [Spain.] (Campanian.)
- H. zuffardii Checchia-Rispoli, 1921:30-31, pl. 9: figs. 8-11. [Tripoli, Libya.] (Senonian.)

Genus Ismidaster Böhm

UPPER CRETACEOUS

Ismidaster Böhm, 1927:194–195. Type-species. I. toulai Böhm, 1927:194–195, pl. 11: figs. 3a–e. [Bithynia, Asia Minor.] (Senonian.)

Genus Labrotaxis Casey

LOWER CRETACEOUS

Holaster (Labrotaxis) Casey, 1960:260-261. Typespecies: H. (L.) cantianus Casey, 1960:261-263, fig. l, pl. 44: figs. l-4. [Kent, southeast England.] (Lower Albian.)

Genus Lampadaster Cotteau

UPPER CRETACEOUS

L. lamberti Tzankov, 1934:211-212, 220, pl. 4: figs. la-b, 2a-b. [Bulgaria.] (Maestrichtian.)

Genus Pseudananchys Pomel

UPPER CRETACEOUS

- P. rydzewski Kongiel, 1936a:4-5, 9. [Poland.] (Maestrichtian.)
- P. stephensoni Cooke, 1953:26, pl. 9: figs. 6-9. [Texas, U.S.A.] (Santonian?)

Genus Pseudholaster Pomel

Lower Cretaceous

P. androaviensis Lambert, 1933a:17, pl. 2: fig. 26. [Madagascar, off East Coast of Africa.] (Albian.)

Genus Pseudoffaster Lambert

CRETACEOUS

P. schmidti Moskvin, 1959:270, fig. 79, pl. 17: figs. la-c. [Caucasus, U.S.S.R.]

UPPER CRETACEOUS

P. renngarteni Schmidt, 1938:80-82, pl. 25: figs. 1a-5, pl. 26: figs. 1a-3. [U.S.S.R.] (Maestrichtian.)

Genus Rispolia Lambert

UPPER CRETACEOUS

R. cottreaui Besairie and Lambert, 1930:107-108, pl. 9: fig. 1. [Madagascar, off East Africa.] (Maestrichtian.)

Genus Stegaster Pomel

UPPER CRETACEOUS

S. novoi Lambert, 1931a:M6-M7, fig. 1, pl. 1: figs. 1-4. [Spain.] (Aturien.)

UPPER CRETACEOUS

- S. charlesi Lambert, 1931a:M7, fig. 3, pl. 1: figs. 8-9. [Asia Minor.] (Maestrichtian.)
- S. mairei Lambert, 1931a:M8, fig. 2, pl. 1: figs. 12–13. [West Africa.]
- S. zonarius Lambert, 1931a:M7-M8, pl. 1: fig. 7. [Daghestan, Asiatic Russia.] (Upper Senonian.)

Genus Seunaster Lambert in Blayac

In the *Treatise*, Wagner and Durham (Durham et al., 1966:U533) consider *Seunaster* a subjective synonym of *Stegaster* Pomel.

UPPER CRETACEOUS

S. georgicus Rouchadzé, 1940:95-97, 143-144, 164-165, figs. 4a-d, pl. 1: figs. 2a-e. [Georgia, U.S.S.R.] (Maestrichtian/Campanian.)

- S. georgicus Rouchadzé lata Rouchadzé, 1940:97, 143-144, 164-165, fig. 4d, pl. 1: figs. 2a-e. [Georgia, U.S.S.R.] (Maestrichtian/Campanian.)
- S. lamberti Charles in Lambert and Charles, 1937: 383-384, pl. 8: figs. 6-8. [Asia Minor.] (Maestrichtian.)
- S. lazicus Rouchadzé, 1940:97-98, 144, 165, figs. 5a-c, pl. 1: figs. 3a-e. [Georgia, U.S.S.R.] (Maestrichtian/Campanian.)

Suborder URECHININA H. L. Clark

RECENT

URECHININA H. L. Clark, 1925a:185. [In the Treatise Durham (Durham et al., 1966:U277) states: "The suborder Urechinina was proposed by H. L. Clark (1946) for irregular echinoids with a sternum in which the 'labrum [is] followed by a single plate.' As defined, this suborder includes some but not all of the Holasteroida as proposed subsequently by Durham and Melville (1957)." This taxon is not used in the Treatise.]

Family URECHINIDAE Duncan

Genus Chelonechinus Bather

MIOCENE

Chelonechinus Bather, 1934:808, 860-861. Type-species: C. suvae Bather, 1934:808-809, 811-832, 861, figs. 1-12, pls. 108-110. [Fiji Islands, South Pacific Ocean.]

Unknown

C.? javanensis Bather, 1934:809, 835, 862, fig. 16. [Java, South Pacific, Malay Archipelago.]

Genus Plexechinus A. Agassiz

RECENT

P. spectabilis Mortensen, 1948a:110-111. [Philippine Islands.]

Genus Sternopatagus de Meijere

RECENT

S. sinensis Bather, 1934:847-848. [China Sea.]

Order POURTALESIOIDA Mintz

POURTALESIOIDA Mintz, 1968:1287-1288.

Family POURTALESIIDAE A. Agassiz

Genus Pourtalesia A. Agassiz

RECENT

- P. aurorae Koehler, 1926:43–48, pl. 105: figs. 1–8, pl. 121: fig. 3. [Antarctic.]
- P. debilis Koehler, 1926:49–51, pl. 105: fig. 9, pl. 106: figs. 1–10, pl. 122: fig. 1. [Antarctic.]
- P. laguncula A. Agassiz beringiana Baranova, 1955: 340-341, fig. 5. [Bering Sea.]

Family STENONASTERIDAE Lambert

Genus Stenonaster Lambert

AGE UNKNOWN

S. douvillei Lambert, 1928d:263-265, figs. 1-2. [France. Stenonaster Lambert 1922 replaces Stonocorys Lambert and Thiéry, 1917, (not Burmeister, 1835, nor Rambur, 1839) proposed to replace Stenonia Desor, 1858, (not Gray, 1853). Found with Jeronia pyrenaica and Echinocorys douvillei in the "carriere Bourda de la 'Costa Blanche', a l'Est de Mousis, 2 km à l'W de Lasseube."]

Family SOMALIASTERIDAE Wagner and Durham

Genus Somaliaster Hawkins

UPPER CRETACEOUS

Somaliaster Hawkins, 1935a:53, 56. Type-species: S. magniventer Hawkins, 1935a:53-56, figs. 8-14, pl. 7: figs. 2a-c, 3a-c. [Somaliland, East Africa.] (Upper Senonian.)

S. magniventer Hawkins var. checchiai Maccagno, 1941:93-95, pl. 11: figs. 10-11. [North Africa.] (Senonian.)

Genus Brightonia Kier

PALEOCENE

Brightonia Kier, 1957b:871-872. Type-species: B. macfadyeni Kier, 1957b:872-873, fig. 13, pl. 104: figs. 12-13. [British Somaliland, East Africa.] (Lower Auradu Series.)

Genus Leviechinus Kier

PALEOCENE

Leviechinus Kier, 1957b:873-874. Type-species: Pericosmus gregoryi Currie. [British Somaliland, East Africa.] (Lower Auradu Series.)

Family Uncertain

Genus Coraster Cotteau

PALEOCENE

C. vilanovae Cotteau var. alapliensis Lambert in Flandrin, 1929:344-345, pl. 2: figs. 3a-c, 4a-c. [Asia Minor.] (Danian.)

PALEOCENE/UPPER CRETACEOUS

C. deleaui Lambert in Deleau, 1938:186, pl. 5: fig. 2. [Algiers, North Africa.] (Danian-Maestrichtian.)

CRETACEOUS

- C. caucasicus Moskvin, 1959:276-277, fig. 87, pl. 18: figs. 3a-c. [Caucasus, U.S.S.R.]
- C. cubanicus Moskvin, 1959:277, fig. 88, pl. 18: figs. 4a-c. [Caucasus, U.S.S.R.]

UPPER CRETACEOUS

C. ansaltensis Moskvin, 1959:279, fig. 91, pl. 18: figs. 7a-c. [Dagestan and Turkmenistan, U.S.S.R.]

- C. frechi Böhm, 1927:195-196, pl. 12: figs. 5a-b. [Bithynia, Asia Minor.] (Senonian.)

 C. manuelitae Sánchez Roig, 1952c:12, pl. 6: figs.
- 8-9. [Cuba.] (Senonian.)

Genus Corechinus Kongiel

PALEOCENE

Corechinus Kongiel, 1936a:3-4, 8-9. Type-species: C. pulaviensis Kongiel, 1936a:3-4, 8-9. [Poland. Figured in Kongiel, 1935: pl. 1: fig. 4, pl. 2: figs. 6a-c.] (Middle siwak. Danian.)

Genus Turanglaster Solovyev and Melikov

UPPER CRETACEOUS

Turanglaster Solovyev and Melikov, 1963:107. Type-species: T. nazkii Solovyev and Melikov, 1963:107-109, fig. 1, pl. 10: figs. 1-2. [Turkmen and Azerbaijan, U.S.S.R.]

Order SPATANGOIDA Claus

Genus Pictaviechinus Mintz

MIDDLE JURASSIC

Pictaviechinus Mintz, 1967:2747. Type-species: Pygomalus [sic] pictaviensis Lambert and Thiéry. [Mintz referred Pygomalus pictaviensis Lambert and Thiéry to a new genus, Pictaviechinus, but included no description of the genus. Pictavie-chinus is, therefore, a nomen nudum.] (Bathonian.)

Suborder TOXASTERINA A. G. Fischer

Family TOXASTERIDAE Lambert

Genus Toxaster L. Agassiz

UPPER CRETACEOUS

T. millosevichi Checchia-Rispoli, 1936:300-302, pl. 16: figs. 1-1a, pl. 17: fig. 3. [Sicily, southwest of Italy.] (Cenomanian.)

LOWER CRETACEOUS

- T. gabrieli Denizot, 1935:141-142, pl. 5: fig. 3. [France.] (Upper Hauterivian.)
- T. laffitei Devriès, 1960:21-22, pl. 5: figs. 10-20, pl. 35: figs. 15-16. [Algeria, North Africa. Mintz (1967:2748) referred Toxaster lafittei to a new genus Devriesia Mintz but included no description of the genus. Devriesia is, therefore, a nomen nudum.] (Berriasian.)
- T. mattaueri Devriès, 1960:21, pl. 5: figs. 1-9, pl. 35: fig. 2. [Algeria, North Africa.] (Aptian.)
- T. maurus Lambert, 1931c:40-41, pl. 2: figs. 13-15. [North Africa.] (Hauterivian.)
- T. sanchuensis Tanaka, 1965:131–133, figs. 3a-c, pl. 15: figs. 5a-b, 6a-b, pl. 16: figs. 1a-c, 2a-c. [Japan.] (Neocomian.)

Genus Pliotoxaster Fourtau

Fischer (Durham et al., 1966:U551), in the *Treatise*, considers *Pliotoxaster* a subjective synonym of *Toxaster*.

LOWER CRETACEOUS

P. inflatus Smiser, 1936:465, pl. 63: figs. 1, 4, 15, 23-25. [Texas, U.S.A.] (Comanchean.)

Genus Allotoxaster Nisiyama

UPPER JURASSIC

Allotoxaster Nisiyama, 1968:181-182. Type-species: Toxaster tosaensis de Loriol. [Japan.] (Callovian-Tithonian.)

Genus Aphelaster Lambert

Lower Cretaceous

A. serotinus Tanaka and Shibata, 1961:70-72, figs. 1-2, pl. 10: figs. 1-6. [Japan.] (Barremian/Hauterivian.)

Genus Douvillaster Lambert

LOWER CRETACEOUS

D. hourcqi Collignon, 1950:11–12, pl. 2: figs. 2–3. [Madagascar, off East Africa.] (Albian.)

Genus Heteraster d'Orbigny

Lower Cretaceous

- H. adkinsi Lambert, 1927a:270. [Texas, U.S.A.], (Comanche Series.)
- H. aguilerai Buitron, 1970:32–34, pl. 7: figs. 1–5. [Barranca Salitrillo, San Juan Raya, Puebla, Mexico.]
- H. alencasterae Buitron, 1970:34–35, pl. 6: figs. 1–6.[Barranca Salitrillo, San Juan Raya, Puebla, Mexico.]
- H. cesarensis Cooke, 1955:101, pl. 24: figs. 1-4. [Colombia.] (Neocomian.)
- H. checchiai Alberti, 1950:133–135, pl. 1: figs. 1–12. [Italian Somaliland, Africa.]
- H. danubiensis Chiriac, 1956:87-88, pl. 10: figs. la-d, E. [Rumania.] (Aptian.)
- H. mattaueri Devriès, 1960:62-63, pl. 13: figs. 1-11. [Algeria, North Africa.] (Upper Albian.)
- H. nexilis Nisiyama, 1950a:42–44, figs. 1–3. [Japan.] (Neocomian.)

UPPER JURASSIC

H. musandamensis Lees, 1928:642-643, figs. 9-10, pl. 44: figs. 4a-b. [Arabia.]

Genus Enallaster d'Orbigny

In the *Treatise*, Fischer (Durham et al., 1966:U553) considers *Enallaster* a subjective synonym of *Heteraster* d'Orbigny.

Lower Cretaceous

- E. roscheni Richards, 1947:39-40, pl. 2: figs. 4-6. [Peru.] (Aptian.)
- E. transiens Devriès, 1956a:254-260, pl. 1-3. [Algeria, North Africa.] (Albian.)
- E. yuasensis Tanaka and Okubo, 1954:223-224, pl. 7: fig. 6. [Japan.] (Barremian.)

Genus Epiaster d'Orbigny

In the *Treatise*, Fischer (Durham et al., 1966:U553) considers *Epiaster* a subjective synonym of *Heteraster* d'Orbigny.

UPPER EOCENE

E. angolensis Haughton, 1924:101, pl. 4: fig. 5. [Angola, southwest Africa.]

UPPER CRETACEOUS

- E. africanus Checchia-Rispoli, 1947a:17-18, pl. 1: figs. 1-1a. [Somaliland, East Africa.] (Cenomanian.)
- E. caranoi Checchia-Rispoli, 1947a:16-17, pl. 2: figs. 4-4a. [Somaliland, East Africa.] (Cenomanian.)
- E. carvalhoi Dartevelle, 1953:142-143, pl. 10: figs. 1-2. [Angola, southwest Africa.] (Senonian?)
- E. chiapasensis Lambert, 1935d:370-371, pl. 16: fig. 22. [Mexico.] (Lower Senonian.)
- E. migliorinii Checchia-Rispoli, 1947a:19-20, pl. 1: figs. 5-7. [Somaliland, East Africa.] (Cenomanian.)
- E. ovalis Checchia-Rispoli, 1947a:14–15, pl. 2: fig. 5. [Somaliland, East Africa.] (Cenomanian.)
- E. pulcher Checchia-Rispoli, 1947a:20-21, pl. 1: figs. 4, 4a-b. [Somaliland, East Africa.] (Cenomanian.)
- E. somaliensis Checchia-Rispoli, 1947a:11-14, pl. 1: figs. 2-3, pl. 2: figs. 1-3. [Somaliland, East Africa.] (Cenomanian.)
- E. somaliensis Checchia-Rispoli var. rotundata Checchia-Rispoli, 1947a:13, pl. 1: fig. 2. [Somaliland, East Africa.] (Cenomanian.)
- E. trauthi Kühn, 1925:182–183, 186–187, pl. 11: figs. 5-6. [Austria.] (Maestrichtian?)
- E. variabilis Kühn, 1925:181-182, 186-187, pl. 11: figs. 2-4. [Austria.] (Maestrichtian?)

LOWER CRETACEOUS

- E. alpinus Lambert and Jeannet, 1928b:116. [France.] (Albian?)
- E. angolensis Haughton, 1925:281, pl. 15: fig. 5. [Angola, southwest Africa.] (Upper Albian?)
- E. besairiei Lambert, 1933a:18-19, pl. 3: fig. 4. [Madagascar, off East Africa.] (Middle Albian.)
- E. boipebensis Brito, 1964:7-8, pl. 1: fig. 1, pl. 2: fig. 3. [Brazil.] (Albian.)
- E. blanckenhorni Blanckenhorn, 1925[1924]:98-99, pl. 8: figs. 26-27. [Palestine, Israel.] (Albian.)
- E. dartoni Cooke, 1955:108-109, pl. 28: figs. 1-10. [New Mexico, U.S.A.] (Aptian?)

- E. fourtaui Lambert, 1931d:190, pl. 6: figs. 5-6. [Egypt.] (Aptian?)
- E. jeanneti Collignon, 1950:13-14, pl. 2: figs. 4, 4a-b. [Madagascar, off East Africa.] (Albian.)
- E. mortenseni Checchia-Rispoli, 1947a:10-11, pl. 1: figs. 8-9. [Somaliland, East Africa.] (Albian.)
- E. renfroae Cooke, 1955:109, pl. 29: figs. 1-4. [Texas, U.S.A.] (Upper Albian?)
- E. toxasteroides Lobacheva and Poretskaya, 1967: 182–185, figs. 1–2, pl. 1: figs. 1–9. [Turkmen, U.S.S.R.] (Upper Barremian to lower Aptian.)

Genus Isomicraster Lambert

CRETACEOUS

I. brueti Lambert, 1931c:101–102, pl. 4: figs. 8–9.[Tunis, North Africa.] (Aturien.)

UPPER CRETACEOUS

- I. danei Cooke, 1953:29, pl. 11: figs. 11-13. [Arkansas, U.S.A.] (Campanian/Santonian?)
- I. faasi Rouchadzé, 1940:124-125, 153-154, 173-174, figs. 16-17, pl. 3: figs. 4a-c. [Georgia, U.S.S.R.]
- I. gregalis Böhm, 1927:198–199, pl. 12: figs. 2a-b. [Bithynia, Asia Minor.] (Senonian.)
- I. mexicanus Lambert, 1935d:371-372, fig. 2. [Mexico.] (Lower Cenomanian.)
- I. rossi Cooke, 1953:29, pl. 11: figs. 15-16. [Texas, U.S.A.] (Turonian.)

Genus Isopatagus Mortensen

RECENT

Isopatagus Mortensen, 1948a:113. Type-species: I. obovatus Mortensen, 1948a:113. [Philippine Islands.]

Genus Macraster Roemer

CRETACEOUS

M. triangularis Sánchez Roig, 1949:217, pl. 34: figs.1–2. [Cuba.]

UPPER CRETACEOUS

M. meghilensis Lambert, 1931c:100-101, pl. 4: figs. 6-7. [North Africa.] (Cenomanian.)

LOWER CRETACEOUS

- Hemiaster (Macraster) cascajalensis Cooke, 1949b: 85-86, pl. 22: figs. 6-11. [Peru.] (Albian/Neocomian?)
- M. denisonensis Smiser, 1936:471, pl. 66: figs. 1-4. [Texas, U.S.A.] Comanchean.)
- M. ibizaensis Jeannet, 1934c:387; 1935a:183-185, fig. 3, pl. 1: figs. 4-6. [Balearic Islands, western Mediterranean.] (Aptian/Urgonian.)
- M. kentensis Adkins, 1930:106-108, pl. 11: figs. 1-3, 5. [Texas, U.S.A.] (Comanche Series—Ft. Worth and Duck Creek Fms.)
- M. obesus Adkins, 1930:116-119, pl. 10: figs. 2-4,pl. 11: fig. 6. [Texas, U.S.A.] (Comanche Series, Weno Fm.)
- M. obtritus Lambert, 1931c:67, pl. 3: figs. 8-9. [North Africa.] (Aptian.)
- M. pseudoelegans Adkins, 1930:108–110, pl. 10: figs. 1, 5, pl. 11: fig. 4. [Texas, U.S.A.]
- M. roberti Lambert var. ovatus Smiser, 1936:472, pl. 64: figs. 11-14. [Texas, U.S.A.] (Comanchean.)
 M. solitariensis Smiser, 1936:472, pl. 65: figs. 13, 15, 16, 18, 19. [Texas, U.S.A.] (Comanchean.)

Genus Mokotibaster Lambert

UPPER CRETACEOUS

Mokotibaster Lambert, 1933a:17-18. Type-species: M. hourcqi Lambert, 1933a:18, pl. 3: figs. 1-3. [Madagascar, off East Africa.] (Lower Maestrichtian.)

Genus Palmeraster Sánchez Roig

UPPER EOCENE

Palmeraster Sánchez Roig, 1949:268–269. Typespecies: P. palmeri Sánchez Roig, 1949:269, pl. 31: figs. 2–4. [Cuba.]

OLIGOCENE

P. japonicus Morishita, 1956:194-195, pl. 2: figs. la-c. [Japan.] (Ashiya Group.)

UPPER EOCENE

- P. herrerai Sánchez Roig, 1952b:17–18, pl. 1: figs.2–3. [Cuba.]
- P. zanolettii Sánchez Roig, 1952b:17, pl. 5: figs. 3-4. [Cuba.]

Genus Paraheteraster Nisiyama

Lower Cretaceous

Paraheteraster Nisiyama, 1968:188–190. Typespecies: Washitaster? macroholcus Nisiyama. [Japan.] (Barremian to Albian.)

Genus Somalechinus Checchia-Rispoli

UPPER CRETACEOUS

Somalechinus Checchia-Rispoli, 1945[1943]:85–87. Type-species: S. gibbosus Checchia-Rispoli, 1945 [1943]:85–87, pl. 1: figs. 1–3. [Somaliland, East Africa.] (Cenomanian.)

Suborder HEMIASTERINA A. G. Fischer

Family HEMIASTERIDAE Clark

Genus Hemiaster Agassiz

EOCENE

- H. despujolsi Lambert, 1937:90, pl. 3: figs. 18-19. [Morocco.]
- H. digonus d'Archaic var. kohaticus Davies, 1943: 70, pl. 11: figs. 6-9. [India.]

UPPER EOCENE

H. globulosus Sánchez Roig, 1949:240-241, pl. 42: figs. 11-13. [Cuba. Although Sánchez Roig cites it as Upper Oligocene, Brodermann (1949:323) says it is Upper Eocene.]

PALEOCENE

- H. hawkinsi Lambert, 1933a:22-23, pl. 4: fig. 19. [Madagascar, off East Africa.] (Danian.)
- H. moscovensis Cooke, 1959:68, pl. 28: figs. 5-9. [Alabama, U.S.A.] (Porters Creek Clay.)

H. vistulensis Kongiel, 1936a:5-7, 9. [Poland. Figured by Kongiel, 1935: pl. 5: figs. 2a-c, 3.] (Lower and middle siwak. Danian.)

CRETACEOUS

- H. amelianus Cooke, 1953:35, pl. 16: fig. 1. [Guatemala.]
- H. sphericus Lambert, 1935d:372-373, pl. 16: figs. 18-19. [Mexico.] (Between San Bartholomeo and La Concordia.)

UPPER CRETACEOUS

- H. amurensis Schmidt in Schmidt and Vereshchaghin, 1960:229, pl. 1: figs. 6-7. [U.S.S.R.]
- H. arcolensis Cooke, 1953:32-33, pl. 12: figs. 12-16. [Alabama, U.S.A.] (Santonian.)
- H. balboi Airaghi, 1939:263, pl. 10: fig. 1. [North Africa.] (Turonian.)
- H. barthouxi Lambert, 1931d:196, pl. 5: figs. 48–49. [Egypt.] (Turonian.)
- H. batalleri Lambert, 1933d:187–188, pl. 1: figs. 14–16. [Spain.] (Maestrichtian.)
- H. benhurensis Stephenson, 1941:67, pl. 7: figs.8-10. [U.S.A.] (Navarro Group. Maestrichtian.)
- H. besairiei Lambert, 1933a:22. [Madagascar, off East Africa.] (Campanian.)
- H. catandubensis Maury, 1934a:155, pl. 16: figs. 2-3. [Brazil, Rio Grande do Norte.] (Turonian.)
- H. cedroensis Maury, 1936:280-283, pl. 2: figs. 3,7. [Brazil.] (Lower Turonian.)
- H. cranium Cooke, 1946:226–227, pl. 32: figs. 1–4. [U.S.A.] (Washita Group. Cenomanian.)
- H. fourtaui Chiplonker, 1937:64. [India. New name for Hemiaster cenomanensis Duncan, 1887, not Cotteau, 1887; H. oldhami Fourtau, 1918; not Noetling, 1897.] (Lower Cenomanian.)
- H. gemellaroi Checchia-Rispoli, 1936:302–303, pl. 16: figs. 5–5a, pl. 17: figs. 4–4a. [Sicily, southwest Italy.] (Cenomanian.)
- H. gonzalezmunozi Sánchez Roig, 1953c:170-171, pl. 11: figs. 3-4. [Cuba.]
- H. heteropneustes Lambert, 1936c:28-29, pl. 4: figs. 20-22. [Madagascar, off East Africa.] (Maestrichtian.)
- H. holoambitatus Chiplonker, 1937:64-65, pl. 6: figs. 4a-c. [India.] (Lower Cenomanian.)
- H. integer Lambert, 1933a:21-22, pl. 3: figs. 5-6. [Madagascar, off East Africa.] (Upper Turonian.)

- H. jacksoni Maury, 1925:518-521. [Brazil.] (Turonian?)
- H. jacobi Besairie and Lambert, 1930:109, pl. 9: figs. 2-3. [Madagascar, off East Africa.] (Maestrichtian.)
- H. judinkensis Schmidt in Schmidt and Vereshchaghin, 1960:228-229, pl. 1: figs. 1-4. [U.S.S.R.]
- H. labriei Lambert, 1936d:84–85, fig. 1, pl. 6: figs. 5–7. [France.] (Upper Senonian.)
- H. lamberti Sánchez Roig, 1949:238–239, pl. 35: figs. 7–8. [Cuba.]
- H. latesulcatus Lambert, 1936a:206, pl. 24: figs. 3-4. [Madagascar, off East Africa.]
- H. madagascariensis Cottreau, 1922a:118-120, pl.2: figs. 1-8. [Madagascar, off East Africa.] (Upper Senonian.)
- H. madagascariensis Cottreau nana Lambert, 1936a: 205, pl. 24: figs. 5-6. [Madagascar, off East Africa.] (Maestrichtian.)
- H. madrugensis Weisbord, 1934:35-37, pl. 3: figs. 4-6. [Cuba.]
- H. mutabilis Lambert, 1933a:20-21, pl. 3: figs. 7-8. [Madagascar, off East Africa.] (Upper Turonian.)
- H. narindensis Lambert, 1933a:24, fig. 2. [Madagascar, off East Africa.] (Upper Maestrichtian.)
- H. oliveirai Marchesini Santos and de Souza Cunha, 1959:13-15, pl. 3: figs. 1-4. [Brazil.] (Maestrichtian.)
- H. parallelus Lambert, 1936a:206, pl. 24: figs. 1-2. [Madagascar, off East Africa.] (Upper Senonian?)
- H. paronai Checchia-Rispoli, 1921:27–29, pl. 8: fig. 24, pl. 9: figs. 14, 18. [Tripoli, Libya.] (Senonian.)
- H. pseudoanticus Lambert, 1933a:21, pl. 2: figs.27–28. [Madagascar, off East Africa.] (Upper Turonian.)
- H. rioupanemensis Maury, 1925:502-505, pl. 24: fig. 10. [Brazil.]
- H. sabinal Cooke, 1953:34, pl. 13: figs. 7-10. [Texas, U.S.A.] (Santonian/Coniacian?)
- H. sanctisebastiani Maury, 1925:508-511, pl. 24: fig. 13. [Brazil.]
- H. schoelleri Lambert, 1938a:277-278, pl. 19: figs. l-3. [Tunis, North Africa.] (Upper Cenomanian.)
- H. siboneyensis Weisbord, 1934:37-39, pl. 3: figs. 7-9. [Cuba.]
- H. stoliczkai Stefanini, 1928:179–180, pl. 21: figs. 2a-d, 3a-d. [Karakorum, Mongolia.] (Cenomanian.)

H. teilhardi Basse, 1928:115-116, figs. 3-4, pl. 7: figs. 1a-b. [South America.] (Cenomanian?)

H. tubillensis Lambert, 1935f:519-520, pl. 57: figs.

10-11. [Spain.] (Upper Campanian.)

H. uwajimensis Morishita, 1962:114-115, pl. 1: figs. 1-7. [Shikoku, Japan.] (Lower part of Yoshida group.)

Lower Cretaceous

H. hourcqi Lambert, 1936c:28, pl. 2: figs. 7-8. [Madagascar, off East Africa.] (Lower Albian.)

H. reineckei Haughton, 1924:102–103, pl. 4: fig. 4; 1925:282–283, pl. 15: fig. 4. [Angola, southwest Africa.] (Upper Albian.)

H. stefaninii Lang in Montanaro-Gallitelli and Lang, 1937:204–205, pl. 9: fig. 12. [Zululand, Africa.] (Albian.)

H. zululandensis Besairie and Lambert, 1930:116, pl. 10: figs. 3-4. [Zululand, East Africa.] (Albian.)

Subgenus Hemiaster (Mecaster) Pomel

UPPER CRETACEOUS

H. (M.) chirakhanensis Chiplonker, 1939:240-241, pl. 25: figs. 4a-b. [India.] (Cenomanian.)

Subgenus Hemiaster (Trachyaster) Pomel

In the *Treatise*, Fischer (Durham et al., 1966:U559) considers *Trachyaster* Pomel a subgenus of *Hemiaster*.

MIDDLE MIOCENE

T. aichinoi Checchia-Rispoli, 1927:2-5, figs. 1-3, pl. 1: figs. 1-2. [Cyrenaica, Eastern Libya.]

T. hlinnensis Seneš, 1955:26-27, pl. 1: fig. 3. [Eastern Slovakia.] (Helvetian.)

UPPER CRETACEOUS

T. minutus Sánchez Roig, 1949:241-242, pl. 42: figs. 6-8. [Cuba.]

T. simpaticus Sánchez Roig, 1949:242-243, pl. 42: figs. 3-5. [Cuba.] (Maestrichtian.)

Genus Crucibrissus Lambert

UPPER EOCENE

C. cabrerai Sánchez Roig, 1953a:67, pl. 10(pars), pl. 21. [Cuba.]

MIDDLE EOCENE

C. abichi Meffert, 1931:38-39, pl. 6: figs. 10-11. [Armenia.] (Lutetian.)

Genus Distefanaster Checchia-Rispoli

UPPER CRETACEOUS

D. pygmeus Lambert, 1933a:25, pl. 4: fig. 18. [Madagascar, off East Africa.] (Upper Maestrichtian.)

Genus Ditremaster Munier-Chalmas

OLIGOCENE

Opissaster (Ditremaster) oligocenicus Stchépinsky, 1943a:225, 238–239, pl. 1: fig. 6; 1943b:225, pl. 1: fig. 6. [Turkey.]

MIDDLE EOCENE

D. granosus Lambert, 1933a:40, pl. 4: fig. 17. [Madagascar, off East Africa.] (Lutetian.)

D. olbrechtsi Dartevelle, 1953:148-153, figs. 48-50, pl. 11: figs. 1-5. [Congo and Angola, South Africa.] (Lutetian.)

Genus Hernandezaster Sánchez Roig

UPPER OLIGOCENE

Hernandezaster Sánchez Roig, 1949:211–212. Typespecies: H. hernandezi Sánchez Roig, 1949: 212–213, pl. 33: figs. 3–5. [Cuba.]

Genus Holcopneustes Cotteau

MIOCENE

H.? pomeyroli Jeannet, 1952:413-416, pl. 12: figs. 1-5. [New Caledonia, southwest Pacific Ocean east of Queensland, Australia.]

LOWER EOCENE

H. obtritus Lambert, 1933a:40, pl. 4: fig. 11. [Madagascar, off East Africa.] (Lower Lutetian.)

PALEOCENE

H. narindensis Lambert, 1933a:24-25, pl. 4: figs. 8-10. [Madagascar, off East Africa.] (Danian.)

Genus Opissaster Pomel

MIOCENE

O. herrerae Lambert and Roig in Sánchez Roig, 1926:126–127, pl. 40: figs. 1–2, pl. 41: fig. 3. [Cuba.]

MIDDLE MIOCENE

O. rozieri Lambert, 1928b:124-125. [France.] (Helvetian.)

LOWER MIOCENE

O. kugleri Jeannet, 1928a:41–42, pl. 5: figs. 3–5, pl. 6: fig. 12; 1928b:220. [Venezuela.] (Serie superieure de Agua Salada.)

EOCENE

O. somaliensis Currie, 1925:71-74, fig. 14, pl. 10: figs. 8a-c, 9, 10, 11a-b, 12. [Somaliland, East Africa.]

MIDDLE EOCENE

O. derasmoi Checchia-Rispoli, 1950a[1945–1946]: 32–35, pl. 1: figs. 6–7. [Somaliland, East Africa.]
O. derasmoi Checchia-Rispoli var. angulatus Kier, 1957b:879–880, pl. 105: figs. 7–9. [British Somaliland, East Africa.] (Karkar Series.)

LOWER EOCENE

O. farquharsoni Currie, 1927:438-441, figs. 4a-c. [Somaliland, East Africa.]

PALEOCENE

O. auraduensis Kier, 1957b:876-877, fig. 15a, pl. 105: figs. 3-5. [British Somaliland, East Africa.] (Lower Auradu Series.)

UPPER CRETACEOUS

O. cantabriae Sánchez Roig, 1953c:171-172, pl. 11: figs. 5-6. [Cuba.]

Genus Palhemiaster Lambert

LOWER CRETACEOUS

P. ibericus Jeannet, 1934c:388; 1935a:181-183, figs. 1-2, pl. 1: figs. 1-3. [Balearic Islands, western Mediterranean.] (Aptian/Urgonian.)

Genus Sarsiaster Mortensen

RECENT

Sarsiaster Mortensen, 1950b:157-158. Type-species: S. griegii Mortensen, 1950b:157-158. [North Atlantic.]

Genus Tessieria Collignon

Upper Cretaceous

Tessieria Collignon, 1949:263. Type-species: T. senegalensis Collignon, 1949:263-268, figs. 1-2, pl. 9a: figs. 1-5. [Senegal, West Africa.] (Maestrichtian.)

Genus Washitaster Lambert

Lower Cretaceous

W. barremicus Tanaka and Okubo, 1954:220, pl. 7: fig. 3. [Japan.] (Barremian.)

W. japonicus Tanaka and Okubo, 1954:220-221, pl. 7: fig. 4. [Japan.] (Albian.)

W.? macroholcus Nisiyama, 1950a:44-46, figs. 4-6. [Japan.] (Neocomian.)

Family PALAEOSTOMATIDAE Lovén

Genus Paleostoma Lovén

EOCENE

P. rochi Lambert, 1937:88–89, pl. 3: figs. 15–17. [Morocco.]

Genus Leiostomaster Lambert

Lower Cretaceous

L. bosei Smiser, 1936:476, pl. 64: figs. 4-8. [Texas, U.S.A.] (Comanchean.)

Genus Ornithaster Cotteau

UPPER CRETACEOUS

- O. cordiformis Böhm, 1927:196–197, pl. 12: figs. 3a-b. [Bithynia, Asia Minor.] (Senonian.)
- O. sokolovi Moskvin, 1959:275, fig. 84, pl. 18: figs. 8a-c, 9a-b. [Caucasus, U.S.S.R.]

Family PERICOSMIDAE Lambert

Genus Pericosmus L. Agassiz

RECENT

- P. abatoides H. L. Clark, 1925a:199-200, pl. 11: figs. 4-6. [East end of Barrier Island, South Pacific Ocean.]
- P. akabanus Mortensen, 1939c:38–42, pl. 3: figs. 1–6, pl. 4: figs. 1–16. [Red Sea.]
- P. bidens Mortensen, 1950b:158. [Mauritius, east of Madagascar in the Indian Ocean.]
- P. cordatus Mortensen, 1950b:158. [Golo Islands, Japan.]
- P. keiensis Mortensen, 1950b:159. [Kei Islands, Indonesia.]
- P. mauritianus Mortensen, 1950b:159. [Mauritius, east of Madagascar in the Indian Ocean.]
- P. melanostomus Mortensen, 1948a:119-120. [China Sea.]
- P. oblongus Mortensen, 1950b:159. [Bali Sea, western Pacific Ocean.]
- P. tenuis Mortensen, 1950b:159. [Mauritius, east of Madagascar in the Indian Ocean.]

PLIOCENE

P. schencki Israelsky, 1933b:306-307, pl. 3: figs. 1-2, pl. 4: fig. 1. [Philippine Islands, South Pacific Ocean.]

MIOCENE

- P. artemisae Sánchez Roig, 1953c:168-169, pl. 11: fig. 1. [Cuba.]
- P. magnificus Nisiyama, 1968:269-272, pl. 28: figs. 1-2. [Japan.] (Aijiri Fm.)
- P. valenzuelai Sánchez Roig, 1953c:167–168, pl. 10: fig. 5. [Cuba.]

MIDDLE MIOCENE

- P. israelskyi Durham, 1961a:481, 483, figs. 1I, 1L, 2E, pl. 67: figs. 5, 8, 11. [Costa Rica.] (Burdigalian/Helvetian.)
- P. stehlini Jeannet, 1928a:43-44, pl. 4: figs. 21-24; 1928b:220. [Venezuela.] (Damsite series.)

LOWER MIOCENE

P. stefaninii Socin, 1942:49-50. [Somaliland, East Africa.]

UPPER OLIGOCENE

- P. blanquizalensis Sánchez Roig, 1952c:21, pl. 13: fig. 2. [Cuba.]
- P. camagueyanus Sánchez Roig, 1949:246–247, pl. 38: figs. 1–2. [Cuba.]
- P. delgadoi Sánchez Roig, 1953a:65, pl. 16(pars). [Cuba.]
- P. giganteus Sánchez Roig, 1952c:21-22, pl. 13: fig. 1, pl. 14: fig. 1. [Cuba.]

MIDDLE OLIGOCENE

P. gardensis Venzo, 1933:210-211, pl. 12: fig. 2. [Italy.] (Rupelian.)

EOCENE

P. rojasi Sánchez Roig, 1951:60-61, pl. 36: figs. 2-3. [Cuba.]

UPPER EOCENE

- P. cubanus Palmer in Sánchez Roig, 1949:248. [Cuba.]
- P. zanolettii Sánchez Roig, 1953c:169–170, pl. 11: fig. 2. [Cuba.]

MIDDLE EOCENE

P. clarki Lambert, 1933a:41, pl. 3: fig. 14. [Madagascar, off East Africa.] (Lutetian.)

LOWER EOCENE

P. gregoryi Currie, 1927:430, figs. 7a-b. [Somaliland, East Africa.]

Subgenus Pericosmus (Lambertona) Sánchez Roig

LOWER EOCENE

Lambertona Sánchez Roig, 1953b:257. Type-species: Victoriaster lamberti Sánchez Roig. [Cuba.]

Subgenus Pericosmus (Victoriaster) Lambert

TERTIARY

V. jamaicensis Arnold and H. L. Clark, 1934:150, pl. 3: figs. 1-3. [Jamaica, West Indies.]

LOWER MIOCENE

V. lamberti Sánchez Roig, 1926:129–130, pl. 42: fig. 1, pl. 43: fig. 1. [Cuba.]

Genus Mundaster Soares and Devriès

UPPER CRETACEOUS

Mundaster Soares and Devriès, 1967:8. Typespecies: M. tentugalensis Soares and Devriès, 1967:8-10, fig. 2, pl. 1: figs. 1-9. [Casal Novo do Rio and Carapinheira, Portugal.] (Upper Cenomanian to lower Turonian.)

Family SCHIZASTERIDAE Lambert

Genus Schizaster L. Agassiz

PLIOCENE

- S. alsiensis Maccagno, 1947a:116-121, pl. 1: figs. 1-4. [Rome, Italy.]
- S. jeanneti Martin in Jeannet and Martin, 1937: 293-295, figs. 63a-c, 64. [Dutch East Indies, western Pacific Ocean.]
- S. morlini Grant and Hertlein, 1956:107-109, pl. 29: figs. 1-8. [California, U.S.A.]
- S. portisi Serra, 1932:888-893, fig. 1. [Italy.]
- S. pratti Israelsky, 1933b:305-306, pl. 4: figs. 2-3, pl. 5: figs. 1-4. [Philippine Islands, South Pacific Ocean.]

MIDDLE PLIOCENE

S. excavatus Martin in Jeannet and Martin, 1937: 292–293, figs. 62a–b. [Dutch East Indies, western Pacific Ocean.]

LOWER PLIOCENE

S. kinasaensis Morishita, 1953:224-225, pl. 1: fig. 8. [Japan.] (Middle part of Ogawa Fm.)

MIOCENE

- S. minihagali Deraniyagala, 1956:4, pl. 3: figs. 3–4. [Ceylon, Indian Ocean.]
- S. miyazakiensis Morishita, 1956:197-199, pl. 3: figs. 1a-d, 2a-d, pl. 4: figs. 1a-d. [Japan.] (Miyazaki Group.)

UPPER MIOCENE

S. costaricensis Durham, 1961a:483-484, figs. 1C, 1F, 2G, 2H, pl. 68: figs. 8, 10, 11, 13. [Costa Rica.]

LOWER MIOCENE

- S. guirensis Sánchez Roig, 1949:278-279, pl. 43: figs. 4-5. [Cuba.]
- S. salutis Sánchez Roig, 1949:278, pl. 45: figs. 3-4. [Cuba.]

S. sanctamariae Sánchez Roig, 1949:272, pl. 44: figs. 4-5. [Cuba. Although Sánchez Roig cites it as Upper Cretaceous, Brodermann (1949:328) says it is Upper Oligocene to Lower Miocene.]

OLIGOCENE

S. moronensis Sánchez Roig, 1951:58-59, pl. 36: figs. 4-5. [Cuba.]

UPPER OLIGOCENE

- S. cojimarensis Sánchez Roig, 1949:270, pl. 44: figs. 1, 3. [Cuba.]
- S. dumblei Israelsky, 1924:141. [Mexico.]
- S. habanensis Sánchez Roig, 1949:270-271, pl. 45: figs. 1-2. [Cuba.]
- S. llagunoi Lambert and Roig in Sánchez Roig, 1949:274–275. [Cuba. Although Lambert cites it as Miocene, Brodermann (1949:328) says it is Middle Eocene/Upper Oligocene.]
- S. munozi Sánchez Roig, 1949:277, pl. 43: figs. 1–3. [Cuba.]
- S. vedadoensis Sánchez Roig, 1949:271-272, pl. 45: fig. 8. [Cuba.]

EOCENE

- S. altissimus Arnold and H. L. Clark, 1927:58, pl. 11: figs. 11-13. [Jamaica, West Indies.]
- S. bathypetalus Arnold and H. L. Clark, 1927: 58-59, pl. 12: figs. 1-4. [Jamaica, West Indies.]
- S. brachypetalus Arnold and H. L. Clark, 1927: 59-60, pl. 11: figs. 14-16. [Jamaica, West Indies.]
- S. dyscritus Arnold and H. L. Clark, 1927:61, pl. 12: figs. 7-9. [Jamaica, West Indies.]
- S. hexagonalis Arnold and H. L. Clark, 1927:61-62, pl. 12: figs. 10-11, pl. 13: figs. 1-3. [Jamaica, West Indies.]
- S. narindensis Lambert, 1933a:43, pl. 4: fig. 23. [Madagascar, off East Africa.]
- S. pappi Thirring, 1936:56-57, pl. 2: fig. 17. [Hungary.]

UPPER EOCENE

- S. beckeri Cooke, 1942:40, pl. 3: figs. 5-8. [U.S.A.]
- S. caobaense Sánchez Roig, 1949:273-274, pl. 44: fig. 2. [Cuba.] (Priabonian.)

- S. gerthi Pijpers, 1933:96-97, fig. 157, pl. 1: fig. 19, pl. 2: figs. 10-12. [Dutch West Indies, Netherland Antilles, off Venezuelan coast.]
- S. humei Lambert, 1931d:204, pl. 5: figs. 12–14. [Egypt.] (Priabonian.)
- S. santanae Sánchez Roig, 1949:281–282, pl. 45: figs. 5–7. [Cuba. Although Sánchez Roig cites it as Upper Oligocene, Brodermann (1949:328) says it is Middle to Upper Eocene.]

MIDDLE EOCENE

- S. delorenzoi Checchia-Rispoli, 1950a[1945–1946]: 35–36, pl. 2: figs. 5, 5a–c. [Somaliland, East Africa.]
- S. gigas Sánchez Roig, 1953a:66, pl. 20. [Cuba.]
- S. marci Castex, 1930:53-54, pl. 4: figs. 9-12. [France.] (Upper to Middle Lutetian.)
- S. pentagonalis Sánchez Roig, 1953a:65–66, pl. 19. [Cuba.]

LOWER EOCENE

- S. alcaldei Sánchez Roig, 1949:273, pl. 32: fig. 4. [Cuba. Brodermann (1949:327) says it is Lower Eocene.]
- S. eopneustes Lambert, 1933a:42, pl. 3: fig. 15. [Madagascar, off East Africa.]
- S. leprosorum Lambert, 1933a:42, fig. 8. [Madagascar, off East Africa.]
- S. persica Clegg, 1933:13-14, pl. 1: figs. 6a-c, 7a-c. [Persia (Iran).]

UPPER PALEOCENE

S. schlosseri Traub, 1938:40, pl. 1: figs. 9a-b. [Germany.] (Thanetian.)

Genus Aplospatangus Lambert

In the *Treatise*, Fischer (Durham et al., 1966:U569) considers *Aplospatangus* a subjective synonym of *Schizaster* L. Agassiz.

MIOCENE

Schizaster (Aplospatangus) rojasi Sánchez Roig, 1952c:25–26, pl. 15: figs. 1–3. [Cuba.]

LOWER MIOCENE

S. (A.) riveroi Sánchez Roig, 1952c:27, pl. 15: figs. 4-5. [Cuba.]

Subgenus Schizaster (Schizaster) L. Agassiz

MIOCENE

S. (S.) fernandezi Sánchez Roig, 1952c:25, pl. 9: fig. 3. [Cuba.]

Subgenus Schizaster (Hypselaster) Clark

RECENT

- H. affinis Mortensen, 1948a:121-123. [Philippine Islands.]
- H. dolosus H. L. Clark, 1938:430–432, pl. 28: figs. 4–7. [Western Australia.]

EOCENE

H. perplexus Arnold and H. L. Clark, 1927:56-57, pl. 11: figs. 8-10. [Jamaica, West Indies.]

Subgenus Schizaster (Paraster) Pomel

RECENT

- Paraster erythraeus Tortonese, 1932:1-6, figs. 1-7. [Red Sea.]
- Schizaster (Paraster) floridiensis Kier and Grant, 1965:50–54, fig. 15, pl. 13: figs. 4–6, pl. 14: figs. 1–9. [Florida, U.S.A.]

PLEISTOCENE

P. sierrai Sánchez Roig, 1951:63-64, pl. 40: fig. 1. [Cuba.]

PLIOCENE

- P. eustatii Engel, 1961:3-5, figs. 1-4. [Lesser Antilles, West Indies.]
- P. hyperocus H. L. Clark, 1945:323–324, pl. 42: figs. L-M, pl. 43: fig. A. [Fiji, South Pacific Ocean.]

MIOCENE

P. saipanicus Cooke, 1957:363-364, pl. 119: figs. 18-21. [Mariana Islands, Western Pacific Ocean.]
P. tampicoensis Israelsky, 1924:140. [Mexico.]

OLIGOCENE

P. tschopi Palmer in Sánchez Roig, 1949:290-291, pl. 46: fig. 1. [Cuba. Although Palmer says this is Upper Eocene, Brodermann (1949:325) says it is Lower to Upper Oligocene.]

EOCENE

- P. camagueyensis Weisbord, 1934:68-70, pl. 7: figs. 9-11. [Cuba.]
- P. delgadoi Sánchez Roig, 1953c:174, pl. 12: figs.5–6. [Cuba.]
- S. (P.) taiwanicus Hayasaka, 1948:98-101, pl. 2: fig. 4, pl. 5: figs. 2-5. [China.] (Slate Fm.)

UPPER EOCENE

- P. cubitabellae Weisbord, 1934:72–74, pl. 7: figs. 15–16. [Cuba.]
- P. nuevitasensis Weisbord, 1934:67-70, pl. 7: figs. 7-8. [Cuba.]
- P. orientalis Sánchez Roig, 1949:289–290, pl. 46: figs. 2–3. [Cuba. Although Sánchez Roig cites it as Upper Oligocene, Brodermann (1949:325) says it is Middle to Upper Eocene.]
- P. pastelilloensis Weisbord, 1934:70–72, pl. 7: figs. 12–14. [Cuba.]
- P. pinarensis Sánchez Roig, 1953c:173-174, pl. 12: figs. 3-4. [Cuba.]

MIDDLE EOCENE

S. (P.) karkarensis Kier, 1957b:883-884, pl. 106: figs. 1-3. [British Somaliland, East Africa.] (Karkar Series.)

PALEOCENE

S. (P.) duroensis Kier, 1957b:885–886, pl. 106: figs. 11–14. [British Somaliland, East Africa.] (Lower Auradu Series.)

S. (P.) hunti Kier, 1957b:882-883, pl. 106: figs. 5-7. [British Somaliland, East Africa.] (Lower Auradu Series.)

Genus Abatus Troschel

RECENT

A. curvidens Mortensen, 1936a:226–228, pl. 3: fig. 9, pl. 9: figs. 17–20. [Antarctic Ocean.]

A. ingens Koehler, 1926:58-65, pl. 111: fig. 9, pl. 113: fig. 7, pl. 117: figs. 3-5, 7-8, pl. 118: figs. 1-7, pl. 123: figs. a-k. [Antarctic.]

Genus Agassizia Agassiz and Desor

MIOCENE

- A. algarbiensis Da Veiga Ferreira, 1962:293-295, pl. 1: figs. 1-6. [Portugal.]
- A. cyrenaica Desio, 1929:340–342, pl. 39: figs. 3a-d. [Oasis of Giarabùb, Libya.]
- A. cyrenaica Desio var. pseudoclevei Desio, 1929: 343-344, pl. 39: figs. 4a-c. [Oasis of Giarabùb, Libya.]
- A. cyrenaica Desio var. pseudoinflata Desio, 1929: 342-343, pl. 40: figs. 2a-c. [Oasis of Giarabùb, Libya.]
- A. pinarensis Sánchez Roig, 1952c:22-23, pl. 6: figs. 6-7. [Cuba.]
- A. scrobiculata Valenciennes var. persica Clegg, 1933:29-30, pl. 3: figs. 6a-d. [Persia (Iran).]

LOWER MIOCENE

A. regia Israelsky, 1924:142. [Mexico. Although Israelsky considered the Tuxpam Beds, from where this species was collected, to be Oligocene, these beds are now (Masuda, 1971:215–216) considered to be Early Miocene.]

OLIGOCENE

- A. avilensis Sánchez Roig, 1949:260, pl. 41: figs.4-6, 8. [Cuba.]
- A. camagueyana Weisbord, 1934:83–84, pl. 9: figs. 5–6. [Cuba.]
- A. guanensis Sánchez Roig, 1951:62-63, pl. 39: figs.4-5. [Cuba.]

UPPER OLIGOCENE

- A. alveari Sánchez Roig, 1949:258–259, pl. 41: fig.7. [Cuba.]
- A. lamberti Palmer var. oligocenicus Palmer in Sánchez Roig, 1949:261–262, pl. 38, fig. 5. [Cuba. Although Palmer says it is Lower Oligocene, Brodermann (1949:316) says it is Upper Oligocene.]

LOWER OLIGOCENE

A. lamberti Palmer in Sánchez Roig, 1949:261, pl. 41: fig. 11. [Cuba. Although Palmer says it is Upper Eocene, Brodermann (1949:316) says it is Lower Oligocene.]

UPPER EOCENE

- A. caribbeana Weisbord, 1934:74–76, pl. 8: figs. 1–6. [Cuba.]
- A. flexuosa Sánchez Roig, 1949:257–258, pl. 41: figs. 9–10. [Cuba.]

MIDDLE EOCENE

A. caobaensis Sánchez Roig, 1953c:172-173, pl. 12: figs. 1-2. [Cuba.]

Subgenus Agassizia (Anisaster) Pomel

UPPER OLIGOCENE

- A. (A.) mossomi Cooke, 1942:46-47, pl. 5: figs. 14-17. [U.S.A.]
- A. (A.) wilmingtonica Cooke, 1942:46, pl. 5: figs. 9-13. [U.S.A.]

Genus Eoagassizia Grant and Hertlein

In the *Treatise*, Fischer (Durham et al., 1966:U575) considers *Eoagassizia* a subjective synonym of *Agassizia* (*Anisaster*) Pomel.

EOCENE

Eoagassizia Grant and Hertlein, 1938b:115-116. Type-species: E. alta Alex Clark in Grant and Hertlein, 1938b:116-117, fig. 11, pl. 12: figs. 5-7. [California, U.S.A.] (Probably Sierra Blanca.)

Genus Amphipneustes Koehler

RECENT

- A. bifidus Mortensen, 1950a:304–305, pl. 7: figs.1–3, pl. 9: figs. 1, 7–9. [Antarctic.]
- A. similis Mortensen, 1936a:231–233, pl. 4: figs. 1–7, pl. 9: figs. 21–26. [Antarctic Ocean.]

Genus Antipneustes Koehler (nom. van.)

In the Treatise, Fischer (Durham et al., 1966:U575) considers Antipneustes a synonym of Amphipneustes Koehler.

RECENT

- A. brevisternalis Koehler, 1926:83–87, pl. 112: figs. 2–6, pl. 124: fig. 3. [Antarctic.]
- A. marsupialis Koehler, 1926:79–83, pl. 115: figs.2, 5, 7–9, pl. 124: fig. 2. [Antarctic.]
- A. rostratus Koehler, 1926:70-76, pl. 114: figs. 1-6, pl. 115: figs. 1, 3, 4, 6, pl. 116: figs. 1-6, pl. 117: figs. 1, 2, 6, 9, pl. 124: fig. 1. [Antarctic.]
- A. tumescens Koehler, 1926:76–79, pl. 113: figs. 1–6. [Antarctic.]

Genus Brisaster Gray

RECENT

B. owstoni Mortensen, 1950b:160. [Japan. Gulf of Tokio and Sagami Sea.]

RECENT/PLIOCENE

B. townsendi A. Agassiz woynari Hertlein and Grant, 1960:132–133, pl. 25: fig. 5, pl. 26: figs. 1–3. [Southern California, U.S.A.] (San Diego Fm.)

OLIGOCENE

B. maximus H. L. Clark, 1937b:368, pl. 24: fig. 9. [Oregon, U.S.A.] (Refugian Stage.)

Genus Cagaster Nisiyama

MIOCENE

Cagaster Nisiyama, 1968:248–249. Type-species: Schizaster recticanalis Yoshiwara. [Japan.]

Genus Diploporaster Mortensen

RECENT

Diploporaster Mortensen, 1950b:160. Type-species: D. barbatus Mortensen, 1950b:160. [Zanzibar, East Africa, Indian Ocean.]

Genus Sinaechinus Hayasaka

In the *Treatise*, Fischer (Durham et al., 1966:U576) considers *Sinaechinus* a subjective synonym of *Faorina* Gray.

RECENT/PLIOCENE

Sinaechinus Hayasaka, 1948: 93–94. Type-species: S. kawaguchii Hayasaka, 1948:94–96, pl. 3: figs. 1–5, pl. 4: figs. 1a–c. [China.]

Genus Hemifaorina Jeannet and Martin

MIOCENE

Hemifaorina Jeannet and Martin, 1937:289. Typespecies: Hemiaster tuber Herklots. [Java, Indonesia.]

Genus Linthia Desor

TERTIARY

L. obesa Arnold and H. L. Clark, 1934:148-149, pl.2: figs. 4-6. [Jamaica, West Indies.]

MIOCENE

L. taiwanensis Hayasaka, 1948:90-93, pl. 1: figs. 1a-b, pl. 2: figs. 1a-b. [China.] (Kansirei Fm., upper Kaizan Gp.)

PALEOGENE

- L. desioi Airaghi, 1934:73-74, pl. 5: figs. 12-14. [Libya, North Africa.]
- L. praenipponica Nagao, 1928:18, pl. 1: figs. 1-4. [Japan.]
- L. yessoensis Minato, 1950:158-159, figs. 1-2. [Japan.] (Lower Corbicula bed of the Ishikari Series.)

OLIGOCENE

L. boreasteria Nisiyama, 1968:240-243, figs. 71a-b, 72a. [Northern Japan.] (Nissikutan Fm.)

EOCENE

- L. atolladosae Sánchez Roig, 1951:59-60, pl. 34: figs. 1-2. [Cuba.]
- L. bulgarica Gočev, 1933:56-58, figs. 12-14, pl. 5: fig. 1, pl. 6: fig. 1. [Bulgaria.]
- L. heimei Jeannet, 1936c:56-59, figs. 6-8. [Switzerland.]
- L. mortenseni Checchia-Rispoli, 1950b:36–38, pl. 1: figs. 4–4a. [Northeast Somalia, East Africa.]
- L. mortenseni Checchia-Rispoli var. depressa Checchia-Rispoli, 1950b:38, pl. 1: figs. 5, 5a-b. [Northeast Somalia, East Africa.]
- L. pseudoglobalis Thirring, 1936:60-61, pl. 1: figs. 6-8. [Hungary.]
- L. suitensis Jeannet, 1936c:65-69, figs. 13-15. [Switzerland.]

UPPER EOCENE

- L. balboi Airaghi, 1939:275–276, pl. 11: fig. 13. [North Africa.]
- L. caraibensis Jeannet, 1928a: 16-17, pl. 1: figs. 22-26, pl. 6: fig. 3; 1928b:220. [Trinité, off the coast of Venezuela.] (Priabonian or Jacksonian.)
- L. garciai Sánchez Roig, 1952c:24, pl. 9: fig. 2. [Cuba.]
- L. hanoverensis Kellum, 1926:15–16, pl. 1: figs. 8–9. [North Carolina, U.S.A.]
- Schizaster (Linthia) ocalanus Cooke, 1942:42–43, pl. 5: figs. 18–22. [U.S.A.]

MIDDLE EOCENE

L. darderi Lambert, 1935b:369-370, pl. 41: fig. 7. [Spain.] (Lutetian.)

- L. mortenseni Checchia-Rispoli, 1950a[1945-1946]: 36-38, pl. 1: figs. 4-5. [Somaliland, East Africa.]
- L. mortenseni Checchia-Rispoli var. depressa Checchia-Rispoli, 1950a[1945–1946]:37–38, pl. 1: figs. 5, 5a-b. [Migiurtinia(?), Somaliland, East Africa.]
- L. rolandi Castex, 1930:46-48, pl. 4: figs. 3-5. [France.] (Lutetian.)
- L. trechmanni Hawkins, 1924:319–321, pl. 18: figs. 6–7. [Jamaica, West Indies.]

LOWER EOCENE

- L. arabica Clegg, 1933:16–17, pl. 2: figs. 1a–c, 2a–c. [Arabia.]
- L. gibba Lambert, 1933a:41, fig. 7. [Madagascar, off East Africa.]
- L. hargeisensis Currie, 1943:27. [Somaliland, East Africa.] (Auradu Ls.)
- L. hollandi Barry in Barry and Le Blanc, 1942: 43-44, pl. 2: figs. 3-4. [Texas, U.S.A.]
- L. somaliensis Currie, 1927:432-435. [Somaliland, East Africa.]
- L. sudanensis Bather var. brevipetala Lambert and Pérébaskine, 1929:476-477, pl. 38: fig. 12. [North Africa.]

PALEOCENE

L. maverickensis Gardner, 1933:110-111, pl. 4: figs. 13-14. [Texas, U.S.A.] (Midway Gp.)

CRETACEOUS

L. aguayoi Sánchez Roig, 1949:265–266, pl. 48: figs. 1–2, pl. 49: fig. l. [Cuba. Although Sánchez Roig cites it as Upper Oligocene, Brodermann (1949: 324) says it is Cretaceous.]

UPPER CRETACEOUS

- L. alta Sánchez Roig, 1949:266–267, pl. 49: figs. 3–5. [Cuba.]
- L. avilensis Sánchez Roig, 1949:264, pl. 32: figs. 2-3. [Cuba.]
- L. brodermanni Sánchez Roig, 1949:263–264, pl. 49: figs. 2–4. [Cuba.]
- L. cretacica Sánchez Roig, 1949:264–265, pl. 47: figs. 1–3. [Cuba.]
- L. dainellii Stefanini, 1928:182–184, pl. 21: figs. 6a-e, 7. [Karakorum, Mongolia.] (Cenomanian.)

- L. gonzalezmunozi Sánchez Roig, 1952c:23-24, pl.9: fig. 1. [Cuba.] (Senonian.)
- L. mullerriedi Lambert, 1935d:373, pl. 16: figs. 20–21. [Mexico.] (Lower Senonian.)

Subgenus Linthia (Lutetiaster) Lambert

MIDDLE EOCENE

- L. lamberti Castex, 1930:48, pl. 4: figs. 6-8. [France.] (Upper Lutetian.)
- L. maccagnoi Checchia-Rispoli, 1950a[1945–1946]: 38–39, pl. 1: figs. 3–3a. [Somaliland, East Africa.]

Genus Moira A. Agassiz

RECENT

M. lachesis Mortensen, 1930:389–393, fig. 1, pl. 2: figs. 1–7, pl. 3: figs. 5–8, pl. 4: figs. 1–14. [Japan.]
M. lethe Mortensen, 1930:392, fig. 2, pl. 3: figs. 1–4. [Queensland, Australia.]

MIOCENE

M. adamthi Clegg, 1933:27-29, pl. 3: figs. 4a-c, 5a-c. [Persian Gulf.]

LOWER MIOCENE

M. obesa Nisiyama, 1935:164–167, figs. 9a-c, pl. 8: figs. 6-16. [Japan.]

Subgenus Moira (Moiropsis) A. Agassiz

UPPER MIOCENE

M. depressa Hayasaka, 1948:106-109, pl. 1: figs. 4a-c. [China.]

Genus Periaster d'Orbigny

PALEOCENE/CRETACEOUS

P. inconstans Lambert, 1933a:25-26, pl. 4: fig. 15. [Madagascar, off East Africa.] (Danian/Upper Maestrichtian.)

CRETACEOUS

P. kuhni Mitzopoulos, 1960:285, pl. 3: figs. 4–6. [Greece.]

UPPER CRETACEOUS

- P. ciryi Lambert, 1935f:520, pl. 57: figs. 13-15. [Spain.] (Coniacian.)
- P. maugerii Checchia-Rispoli, 1936:304-305, pl. 16: figs. 4-4a, pl. 17: fig. 5. [Sicily, southwest of Italy.] (Cenomanian.)
- P. subsexangulatus Airaghi, 1939:264, pl. 10: figs. 2-3. [North Africa.] (Maestrichtian.)
- P. zinai Airaghi, 1939:265, pl. 10: fig. 6. [North Africa.] (Maestrichtian.)

Genus Prenaster Desor

EOCENE

P. skorpili Gočev, 1933:58–59, pl. 2: figs. 1a-b, pl. 4: fig. 6, pl. 7: fig. 19a-d. [Bulgaria.]

UPPER EOCENE

- P. jeanneti Pijpers, 1933:93-94, fig. 156, pl. 1: figs. 9-12. [Netherland Antilles, Dutch West Indies.]
- P. nuevitasensis Sánchez Roig, 1949:252, pl. 42: figs. 1-2. [Cuba. Although Sánchez Roig says it is Eocene, Brodermann (1949:326) says it is Middle to Upper Eocene.]
- P. parvus Palmer in Sánchez Roig, 1949:251-252, pl. 42: fig. 12. [Cuba.]
- P. sanchezi Lambert in Sánchez Roig, 1949:251, pl. 46: figs. 4-6. [Cuba. Although Sánchez Roig says it is Eocene, Brodermann (1949:326) says it is Middle to Upper Eocene.]

MIDDLE EOCENE

P. clarcki Sánchez Roig, 1949:252-253, pl. 46: figs.
7-8. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:326) says it is Middle Eocene.]

Cretaceous

P. elongatus Sánchez Roig, 1949:250, pl. 50: figs. 3-4. [Cuba. Although Sánchez Roig says it is Lower Eocene, Brodermann (1949:326) says it is Cretaceous.]

Subgenus Prenaster (Saviniaster) Lambert

RECENT

S. enodatus Chesher, 1968a:143-149, pls. 33-35. [Bahama Island, southeast of Florida, U.S.A.]

Genus Proraster Lambert

UPPER CRETACEOUS

P. atavus (Arnaud) Lambert var. mediterraneus Kühn, 1925:185-187. [France.] (Lower Campanian.)

Genus Sanfilippaster Checchia-Rispoli

In the Treatise, Fischer (Durham et al., 1966:U578) considers Sanfilippaster a subjective synonym of Proraster Lambert.

UPPER CRETACEOUS

1932b:313-316. Checchia-Rispoli, Sanfilippaster Type-species: Proraster geayi Cotteau. [Madagascar, off East Africa, and Tripoli, Libya.] (Upper Senonian.)

Genus Tripylus Philippi

PALEOCENE

T. pseudoviviparus Lambert, 1933a:27-28, pl. 4: figs. 1-7. [Madagascar, off East Africa.] (Danian.)

UPPER CRETACEOUS

T. antonibensis Lambert, 1933a:28, pl. 4: figs. 12-14. [Madagascar, off East Africa.] (Upper Maestrichtian.)

Suborder MICRASTERINA A. G. Fischer

Family MICRASTERIDAE Lambert

Genus Micraster L. Agassiz

PALEOCENE

M. desori Ødum, 1926:162-163, pl. 2: fig. 1. [Denmark.] (Danian.)

CRETACEOUS

M. depressus Kongiel in Kongiel and Matweijewówna, 1937:116-117, 139-140, pl. 5: figs. 6-9. [Poland.]

M. elevatus Sánchez Roig, 1949:218, pl. 47: figs. 4-5. [Cuba.]

UPPER CRETACEOUS

M. burgiensis Lambert, 1935f:518, pl. 57: figs. 5-8. [Spain.] (Coniacian.)

M. coravium Moskvin, 1959:283, fig. 97, pl. 22: figs. la-e, 2a-b. [Caucasus, U.S.S.R.]

M. gappi Kühn, 1925:184-187, figs. 2a-c. [Austria.] (Coniacian.)

M. piriformis Böhm, 1927:197-198, pl. 12: figs. 7a-c. [Bithynia, Asia Minor.] (Senonian.)

M. subglobosus Moskvin, 1959:280, fig. 92, pl. 19: figs. 1a-e. [Caucasus, U.S.S.R.]

M. trangahyensis Lambert, 1936c:27, pl. 2: figs. 9-10. [Madagascar, off East Africa.] (Upper Senonian.)

M. uddeni Cooke, 1953:37-38, pl. 15: figs. 6-9. [Texas, U.S.A.] (Santonian.)

M. vistulensis Kongiel, 1950:318-320, 325-326, pl. 2: figs. 5-8. [Poland.] (Upper Maestrichtian.)

Subgenus Micraster (Micraster) L. Agassiz

UPPER CRETACEOUS

M. (M.) schroederi Stalley planus Maczyńska. 1968: 116-118, 168, pl. 5: figs. 2a-c, pl. 6: figs. 1a-2d, pl. 7: figs. 1a-e, text-pl. 5: figs. 1-3, text-pl. 6: figs. 1-3. [Poland.] (Campanian.)

M. (M.) bibicensis Maczyńska, 1968:129-130, 168, pl. 13: figs. 1a-4, text-pl. 10: figs. 1-4. [Poland.] (Upper Campanian.)

Subgenus Micraster (Paramicraster) Maczyńska

UPPER CRETACEOUS

- Micraster (Paramicraster) Maczyńska, 1968:154–155. Type-species: M. (P.) latior (Rowe). [Poland.] (Santonian.)
- M. (P.) cracoviensis Maczyńska, 1968:155-157, 168, pl. 24: figs. 1a-e, pl. 25: figs. 1a-d, text-pl. 21: figs. 1-4. [Poland.] (Lower Campanian.)

Genus Brissopneustes Cotteau

LOWER EOCENE

B. desioi Lambert, 1933a:36, pl. 3: fig. 13. [Madagascar, off East Africa.]

PALEOCENE

- B. decaryi Lambert, 1933a:19, pl. 3: figs. 9-10. [Madagascar, off East Africa.] (Danian.)
- B. schwetzovi Poslavskaia and Moskvin, 1960:73-74, 81, fig. 24, pl. 6: figs. 2a-d, 3. [U.S.S.R.] (Danian.)

Genus Isopneustes Pomel

PALEOCENE

Micraster (Isopneustes) eysdenensis Smiser, 1935b: 84, pl. 7: figs. 7a-g. [Belgium.] (Montian.)

M. (I.) montensis Smiser, 1935b:84, pl. 7: figs. 8a-d. [Belgium.] (Montian.)

Family BRISSIDAE Gray

Genus Brissus Gray

RECENT

B. gigas Fell, 1947:145–150, figs. 1–2, pls. 13–14. [New Zealand.]

PLIOCENE

B. lasti Stockley, 1927:116-117, pl. 21: fig. 6. [Zan-zibar Protectorate, East Africa.]

MIOCENE

B. latidunensis Clegg, 1933:30-33, pl. 3: figs. 7a-c. [Persian Gulf.]

UPPER MIOCENE

B. glenni Cooke, 1959:82, pl. 36: figs. 5-6. [South Carolina, U.S.A.]

LOWER MIOCENE

B. kewi Grant and Hertlein, 1938b:128-129, pl. 12: figs. 1-2. [California, U.S.A.] (Vaqueros Fm.)

OLIGOCENE

B. duperieri Castex, 1947:33-34, pl. 2: figs. 21-22. [France.] (Lattorfian = Sannoisian.)

UPPER EOCENE

B. camagueyensis Weisbord, 1934:76–78, pl. 9: figs. 1–2. [Cuba.]

MIDDLE EOCENE

B. caobaense Sánchez Roig, 1953c:163, pl. 7: fig. 5, pl. 8: figs. 1-2. [Cuba.]

Subgenus Brissus (Allobrissus) Mortensen

Fischer (Durham et al., 1966:U582), in the *Treatise*, considers *Brissus* (Allobrissus) Mortensen a subjective synonym of *Brissus* Gray.

RECENT

- Brissus (Allobrissus) Mortensen, 1950b:162. Typespecies: Brissus agassizii Döderlein. [Northern Pacific Ocean.]
- B. (A.) meridionalis Mortensen, 1950b:162. [Australian region.]

MIDDLE MIOCENE

B. (A.) miocaenicus Schaffer, 1961:149-156, fig. 1, pl. 1: figs. 1-6, pl. 2: figs. 1-9. [Austria.] (Tortonian.)

Genus Sandiegoaster Sánchez Roig

In the *Treatise*, Fischer (Durham et al., 1966:U582) considers *Sandiegoaster* a subjective synonym of *Brissus* Gray.

MIDDLE EOCENE

Sandiegoaster Sánchez Roig, 1952b:12. Type-species: S. durhami Sánchez Roig, 1952b:12–13, pl. 5: fig. 2, pl. 6: fig. 2, pl. 7: fig. 2. [Cuba.]

Genus Aguayoaster Sánchez Roig

MIDDLE EOCENE

Aguayoaster Sánchez Roig, 1952b:10-11. Typespecies: A. aguayoi Sánchez Roig, 1952b: 11-12, pl. 8: figs. 3, 5-7. [Cuba.]

Genus Anabrissus Mortensen

RECENT

Anabrissus Mortensen, 1950b:161. Type-species: Brissus damesi A. Agassiz. [Tropical Atlantic.]

Genus Anametalia Mortensen

RECENT

Anametalia Mortensen, 1950b:161. Type-species: Brissus sternaloides Bolau. [Indonesia.]

A. grandis Mortensen, 1950b:161. [Coast of Indo-China.]

Genus Arcaechinus Kier

LOWER EOCENE

Arcaechinus Kier, 1957b:891. Type-species: A. auraduensis Kier, 1957b:891–893, fig. 18, pl. 107: figs. 6–8. [British Somaliland, East Africa.] (Upper Auradu Series.)

Genus Brissopatagus Cotteau

LOWER MIOCENE/UPPER OLIGOCENE

B. venzoi Checchia-Rispoli, 1947b:518-520, pl. 1: figs. 1-13. [North Africa.] (Aquitanian/Chattian.)

OLIGOCENE

Eupatagus (Brissopatagus) avilensis Sánchez Roig, 1951:45-46, pl. 33: figs. 2-3. [Cuba.]

UPPER EOCENE

- E. (B.) alabamensis Cooke, 1942:58-59, pl. 4: figs. 7-8. [U.S.A.]
- E. (B.) georgianus Cooke, 1942:58, pl. 7: figs. 8-11. [U.S.A.]
- B. rojasi Sánchez Roig, 1953c:164, pl. 9: figs. 5-6. [Cuba.]

MIDDLE EOCENE

- B. collignoni Lambert, 1933a:37-38, pl. 4: fig. 21. [Madagascar, off East Africa.] (Lutetian.)
- B. lummaui Castex, 1930:41–42, pl. 4: figs. 1–2. [France.] (Lutetian.)

PALEOCENE

E.? (B.?) primus Cooke, 1942:59, pl. 4: figs. 1-4. [U.S.A.] (Clayton Fm.)

Genus Brissopsis L. Agassiz in Agassiz and Desor

RECENT

- B. micropetala Mortensen, 1948a:124-125. [Philippine Islands.]
- B. obliqua Mortensen, 1948a:125-126. [Philippine Islands.]
- B. persica Mortensen, 1940c:107-110, fig. 23, pl. 2: figs. 5-11. [Iranian Gulf.]
- B. persica Mortensen var. elevata Mortensen, 1940c: 110, pl. 2: fig. 12. [Iranian Gulf.]
- B. caparti Cherbonnier, 1959a:51-54, pl. 9: figs. A-O. [Gulf of Guinea, west central coast of Africa, Atlantic Ocean.]
- B. evanescens Mortensen, 1950b:162. [Off Walfish Bay, South Africa.]
- B. jarlii Mortensen, 1951:302-303, fig. 1, pl. 1: figs. 1-3. [Tropical West Africa.]
- B. similis Mortensen, 1948a:123-124. [Philippine Islands.]

PLIOCENE

- B. japonica Nisiyama, 1968:281-283, pl. 25: fig. 7, pl. 26: figs. 8-9. [Japan.] (Kokumoto Fm.)
- B. luzonica (Gray) cosibensis Nisiyama, 1968:280–281, pl. 25: figs. 5-6. [Japan.] (Koshiba Fm.)

UPPER MIOCENE

B. makiyamai Morishita, 1957:161-163, pl. 1: figs. 1-5. [Japan.]

MEDIAL TERTIARY

B. blanpiedi Grant and Hertlein, 1938a:484-486, figs. 5-6, 8-10. [Mississippi, U.S.A. According to Cooke (1959:86) it is Middle Oligocene.]

OLIGOCENE

B. fermori Vredenburg, 1922:413, pl. 30: fig. 2. [Burma.]

UPPER OLIGOCENE

B. aguayoi Sánchez Roig, 1952c:15-16, pl. 6: figs.1-2. [Cuba.]

UPPER EOCENE

B. steinhatchee Cooke, 1942:49, pl. 5: figs. 29-32. [U.S.A.]

Genus Brissoma Pomel

In the *Treatise*, Fischer (Durham et al., 1966:U584) considers *Brissoma* a subjective synonym of *Brissopsis*.

LOWER MIOCENE

B. vonderschmitti Jeannet, 1928a:37-38, pl. 4: figs. 16-19, pl. 6: figs. 9-11; 1928b:220. [Venezuela.] (Serie superieure d'Agua Salada.)

UPPER OLIGOCENE

B. habanensis Sánchez Roig, 1949: 224–225, pl. 35: figs. 3–4. [Cuba.]

Genus Kleinia Gray

In the *Treatise*, Fischer (Durham et al., 1966:U584) considers *Kleinia* a synonym of *Brissopsis*.

LOWER MIOCENE

Brissopsis (Kleinia) crescenticus Wright var. syriaca Vautrin, 1933:104-106, pl. 12: figs. 2-3. [Asia Minor.] (Burdigalian.)

MIDDLE EOCENE

K. pulcra Checchia-Rispoli, 1950a[1945–1946]:31–32, pl. 2: figs. 4–4a. [Somaliland, East Africa.]

Genus Cionobrissus A. Agassiz

RECENT

C. regularis H. L. Clark, 1925a:221-222, pl. 10: figs. 6-7. [Challenger Sta. 188, west end of Torres Straits (Arafura Sea) between northern Australia and Indonesia.]

Genus Cyclaster Cotteau

RECENT

- C. recens Mortensen, 1950b:161-162. [Coast of Indo-China.]
- C. regalis Baker, 1969:266-270, figs. 1-18, pl. 1: figs. 1-4. [North of East Cape, Northern New Zealand.]

TERTIARY

C. sterea Arnold and Clark, 1934:149-150, pl. 3: figs. 4-5. [Jamaica.]

UPPER OLIGOCENE

C. brodermanni Sánchez Roig, 1949:221, pl. 35: figs. 1-2. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:319) says it is Upper Oligocene.]

LOWER OLIGOCENE

C. drewryensis Cooke, 1942:50, pl. 3: figs. 9-11. [U.S.A.]

EOCENE

C. sanchezi Lambert in Sánchez Roig, 1926:113–114, pl. 38: figs. 1–2. [Cuba. Although Lambert considered this species Late Cretaceous, according to Sánchez Roig (1949:219) it is Eocene.]

MIDDLE EOCENE

C. jeanneti Lambert, 1933a:36-37, pl. 3: figs. 11-12. [Madagascar, off East Africa.] (Lower Lutetian.)

PALEOCENE

C. brunnichi Ravn, 1927:345-347, pl. 5: figs. 5a-e. [Denmark.] (Danian.)

UPPER CRETACEOUS

- C. pfenderae Basse and Lambert in Lambert, 1936c: 27-28, pl. 4: figs. 17-19. [Madagascar, off East Africa.] (Upper Campanian.)
- C. pygmeus Rouchadzé, 1940:129-130, 155, 174-176, fig. 20, pl. 3: fig. 7. [Georgia, U.S.S.R.] (Maestrichtian.)

Subgenus Diplodetus (Protobrissus) Lambert

PALEOCENE

P. indolensis Poslavskaia and Moskvin, 1960:78, 81–82, fig. 29, pl. 8: figs. 2a-e. [Crimea, U.S.S.R.] (Danian.)

UPPER CRETACEOUS

P. akkajensis (Weber) in Moskvin, 1959:290, pl. 26: figs. 1a-e. [Crimea and Caucasus, U.S.S.R.]

Genus Eupatagus L. Agassiz

Lambert and Thiéry (1924:450) referred species previously considered to belong to *Eupatagus* to a pre-Linneaus genus *Brissoides* Klein, 1734. Many

subsequent authors have done this also. Probably all the species listed below that were referred to *Brissoides* should be referred to *Eupatagus*.

RECENT

- E. dyscritus H. L. Clark, 1938:436-437, pl. 28: figs. 10-11. [Australia.]
- E. rubellus Mortensen, 1948a:129-130. [Philippine Islands.]

MIOCENE

- E. cordis Desio, 1929:345-347, pl. 33: figs. 3a-b. [Oasis of Giarabùb, Libya.] (Porto Bardia.)
- E. marianensis Nisiyama, 1968:291-293, pl. 27: figs. 7-8, 10-11. [Mariana Islands (Saipan), western Pacific Ocean.] (Nephrolepidina horizon.)

MIDDLE MIOCENE

E. nipponicus Morishita, 1957:163-164, pl. 1: figs. 7-8. [Japan.]

LOWER MIOCENE

E. hollisi Stockley, 1927:111-113, pl. 20: fig. 5. [Zan-zibar Protectorate, East Africa.]

OLIGOCENE

E. mexicanus Jackson, 1937:234-235, pl. 14, pl. 15: fig. 1. [Mexico.]

UPPER OLIGOCENE

- B. camagueyanus Sánchez Roig, 1949:206–207, pl. 25: fig. 1. [Cuba.]
- B. habanensis Sánchez Roig, 1949:204-205, pl. 23: fig. 4. [Cuba.]
- B. lajasensis Sánchez Roig, 1949:203-204, pl. 24: fig. 1. [Cuba.]
- B. minutus Sánchez Roig, 1949:205. [Cuba.]
- B. palmeri Sánchez Roig, 1949:205–206, pl. 25: figs.4–5. [Cuba.]
- B. sanchezi Lambert in Sánchez Roig, 1949:211, pl. 24: figs. 2-3. [Cuba.]
- B. santanae Sánchez Roig, 1949:210-211, pl. 25: figs. 2-3. [Cuba.]

B. zanolettii Sánchez Roig, 1952c:12–13, pl. 7: figs.1–2. [Cuba.]

EOCENE

- E. alatus Arnold and H. L. Clark, 1927:63-64, pl. 13: figs. 4-7. [Jamaica, West Indies.]
- E. attenuatus Arnold and H. L. Clark, 1927:65, pl. 13: figs. 8-9. [Jamaica, West Indies.]
- B. cranium Leske var. somaliensis Checchia-Rispoli, 1943a:100–103, pl. 2: figs. 1–2, pl. 3: fig. 5. [Somaliland, East Africa.]
- B. dainellii Checchia-Rispoli, 1943a:105–107, pl. 1: figs. 3-6. [Somaliland, East Africa.]
- B. daradensis Lambert in Lambert and Jacquet, 1936:357, pl. 23: figs. 4-5. [Senegal, West Africa.]
- E. defectus Arnold and H. L. Clark, 1927:65-66, pl. 14: figs. 1-3. [Jamaica, West Indies.]
- B. fecundus Checchia-Rispoli, 1943a:109-111, pl. 3: figs. 1-4. [Somaliland, East Africa.]
- E. hildae Hawkins in Arnold and H. L. Clark, 1927:66-67, 81, pl. 22: figs. 9-10. [Jamaica, West Indies.]
- Brissoides (Eupatagus) lamberti Collignon, 1930: 559-561, pl. 32: figs. 1, 1a-b. [Austria.]
- E. longipetalus Arnold and H. L. Clark, 1927:67, pl. 14: figs. 4-6. [Jamaica, West Indies.]
- B. migiurtinus Checchia-Rispoli, 1943a:108–109, pl.2: figs. 3–8. [Somaliland, East Africa.]
- B. migliorinii Checchia-Rispoli, 1943a:103–105, pl.1: figs. 1–2. [Somaliland, East Africa.]
- B. skourensis Lambert, 1937:87-88, pl. 3: figs. 12-14. [Morocco.]

UPPER EOCENE

- E. calistoides Sánchez Roig, 1953c:160-161, pl. 6: fig. 8. [Cuba.]
- B. cuvillieri Lambert, 1935e:42-43, pl. 1: figs. 7-8. [Egypt.] (Bartonian.)
- E. ingens Zachos, 1968:161-163, fig. 1. [Florida, U.S.A.] (Jackson Stage, Ocala Ls.)
- E. siboneyensis Weisbord, 1934:78-80, pl. 8: figs. 7-8. [Cuba.]
- B. stefaninii Lambert and Roig in Sánchez Roig, 1949:207-208, pl. 23: fig. 1. [Cuba.]
- E. stevensi Grant and Hertlein, 1938b:134-135, fig. 12. [California, U.S.A.] (Approximately Domengine.)

E. turibacoensis Sánchez Roig, 1953c:157-158, pl. 8: figs. 3-4. [Cuba.]

MIDDLE EOCENE

- E. brodermanni Sánchez Roig, 1953c:159–160, pl. 9: figs. 1, 4. [Cuba.]
- E. caobaense Sánchez Roig, 1952c:13-14, pl. 6: fig. 10. [Cuba.]
- E. casanovai Sánchez Roig, 1953c: 159, pl. 9: figs. 2-3. [Cuba.]
- E. gadilhei Roman and Gorodiski, 1959:60-61, pl.3: figs. 39-41. [Senegal.] (Upper Lutetian.)

LOWER EOCENE

E. haburiensis Khanna, 1967:214-220, fig. 1, pl. 1: figs. 1-8. [Rajastan, India.] (Ypresian.)

Genus Euspatangus Cotteau

In the *Treatise*, Fischer (Durham et al., 1966:U586) considers *Euspatangus* a subjective synonym of *Eupatagus*.

MIDDLE EOCENE

E. rogeri Pinar, 1951:47-49, fig. 8, pl. 1b: figs. 4-5. [Turkey.]

Genus Megapatagus Sánchez Roig

In the *Treatise*, Fischer (Durham et al., 1966:U586) considers *Megapatagus* a subjective synonym of *Eupatagus* L. Agassiz.

UPPER OLIGOCENE

Megapatagus Sánchez Roig, 1953a:58-59. Type-species: M. franciscanus Sánchez Roig, 1953a:59-60, pls. 6(pars), 11. [Cuba.]

OLIGOCENE

M. depressus Sánchez Roig, 1953a:60, pl. 12. [Cuba.]

UPPER EOCENE

M. turibacoensis Sánchez Roig, 1953a:61, pl. 13. [Cuba.]

Genus Zanolettiaster Sánchez Roig

In the *Treatise*, Fischer (Durham et al., 1966:U586) considers *Zanolettiaster* a subjective synonym of *Eupatagus* L. Agassiz.

UPPER OLIGOCENE

Zanolettiaster Sánchez Roig, 1952c:14. Type-species: Z. herrerae Sánchez Roig, 1952c:15, pl. 8: figs. 1-2, pl. 9: fig. 4. [Cuba.]

Subgenus Eupatagus (Gymnopatagus) Döderlein

OLIGOCENE

- E. (G.) brevipetalum Sánchez Roig, 1951:44-45, pl. 33: fig. 1, pl. 38: fig. 1. [Cuba.]
- E. (G.) rogasi Sánchez Roig, 1951:42, pl. 34: fig. 3. [Cuba.]
- E. (G.) venturillae Sánchez Roig, 1951:43, pl. 26: figs. 1-2. [Cuba.]
- E. (G.) zanoletti Sánchez Roig, 1951:43-44, pl. 32: fig. 3. [Cuba.]

Genus Fernandezaster Sánchez Roig

EOCENE

Fernandezaster Sánchez Roig, 1952c:17. Type-species: F. mortenseni Sánchez Roig, 1952c:18, pl. 10: figs. 1-2. [Cuba, Although Sánchez Roig says it is Upper Oligocene, Fischer (Durham et al., 1966:U588) says it is Eocene.]

Genus Gillechinus Fell

UPPER EOCENE

Gillechinus Fell, 1963a:213. Type-species: G. cudmorei Fell, 1963a:213–215, pls. 1(pt.), 2. [Victoria, Australia.]

Genus Gaultieria Agassiz

PALEOGENE

G. desioi Airaghi, 1934:78-79, pl. 5: figs. 9-10. [Libya, North Africa.]

Genus Herreraster Sánchez Roig

OLIGOCENE

Herreraster Sánchez Roig, 1951:52. Type-species: H. herrerae Sánchez Roig, 1951:53, pls. 30, 31. [Cuba.]

Genus Idiobryssus Clark

RECENT

Idiobryssus H. L. Clark, 1939:173. Type-species: I. coelus H. L. Clark, 1939:173-175, pl. 17: figs. 1-2. [Galápagos Islands, Eastern Pacific Ocean.]

Genus Lajanaster Sánchez Roig

MIOCENE

L. jacksoni Lambert and Roig var. minor Sánchez Roig, 1926: pls. 26, 27. [Cuba.]

OLIGOCENE

- L. guevarai Sánchez Roig, 1951:53-54, pl. 24: figs. 2-4. [Cuba.]
- L. venturillae Sánchez Roig, 1951:54–55, pl. 25: figs. 3–4. [Cuba.]

UPPER OLIGOCENE

- L. hernandezi Sánchez Roig, 1949:195, pl. 23: figs. 2–3. [Cuba.]
- L. rojasi Sánchez Roig, 1953a:58, pl. 10(pars). [Cuba.]

Genus Lissospatangus Mortensen

RECENT

Lissospatangus Mortensen, 1950b:162. Type-species: L. hirsutus Mortensen, 1950b:162. [South of Australia.]

Genus Macropneustes L. Agassiz

TERTIARY

M. dyscritus Arnold and H. L. Clark, 1934:151, pl. 4: figs. 1-2. [Jamaica, West Indies.]

M. sinuosus Arnold and H. L. Clark, 1934:152, pl. 4: fig. 3. [Jamaica, West Indies.]

M. stenopetalus Arnold and H. L. Clark, 1934:152-153, pl. 4: figs. 4-5. [Jamaica, West Indies.]

LOWER MIOCENE

M. dubius Israelsky, 1924:143, pl. 3: fig. 1. [Mexico. Although Israelsky considered the Tuxpam Beds, from where this species was collected, to be Oligocene, these beds are now considered (Masuda, 1971:215–216) to be Lower Miocene.]

OLIGOCENE

M. brodermanni Sánchez Roig, 1953a:62-63, pl. 15 (part), pl. 16 (part). [Cuba.]

M. trevisani Socin, 1942:51-52. [Somaliland.]

UPPER OLIGOCENE

M. gomezmazae Sánchez Roig, 1953a:63, pl. 17. [Cuba.]

EOCENE

M. altus Arnold and H. L. Clark, 1927:68, pl. 14: figs. 7-9. [Jamaica, West Indies.]

M. angustus Arnold and H. L. Clark, 1927:68-69, pl. 14: figs. 10-11, pl. 15: fig. 1. [Jamaica, West Indies.]

M. parvus Arnold and H. L. Clark, 1927:69-70, pl.18: figs. 1-3. [Jamaica, West Indies.]

M. rochi Lambert, 1933b:77–78, pl. 3: fig. 13. [North Africa.]

Subgenus Macropneustes (Deakia) Pavay

UPPER EOCENE

D. armadilloensis Sánchez Roig, 1953c:165-166, pl. 10: figs. 1-2. [Cuba.]

Genus Mariania Airaghi

MIDDLE/LOWER MIOCENE

M. euglypha (Laube) var. brevistella Venzo, 1935: 233, pl. 17: figs. 29a-b. [Italy.] (Langhian.)

Genus Mauritanaster Lambert

UPPER OLIGOCENE

M. depressus Sánchez Roig, 1949:228-229, pl. 33: fig. 1. [Cuba.]

M. marroquinensis Sánchez Roig, 1953a:61-62, pl. 14. [Cuba.]

Genus Meoma Gray

RECENT

M. cadenati Madsen, 1957:474-479, figs. 1-3. [Senegal, West Africa.]

M. frangibilis Chesher, 1970:750-753, figs. 7a-c, 8. [Panama, Bay of Panama (Pacific side).]

EOCENE

M. antiqua Arnold and H. L. Clark, 1927:70, pl. 15: fig. 2. [Jamaica, West Indies.]

MIDDLE EOCENE

M. caobaensis Sánchez Roig, 1952c:16-17, pl. 11: figs. 2-3. [Cuba.]

Subgenus Meoma (Plethotaenia) H. L. Clark

RECENT

P. angularis Chesher, 1968a:111-121, figs. 20(pt.), 22(pt.), 23(pt.), 24, pls. 24-26. [Bahama Island to Barbados, Caribbean Sea.]

Subgenus Meoma (Schizobrissus) Pomel

PLEISTOCENE

S. jacksoni Lambert and Roig in Sánchez Roig, 1949:230-231, pl. 37: figs. 1-2. [Cuba.]

MIOCENE

S.? siliceus Desio, 1929:337-340, pl. 32: fig. 4. [Oasis of Giarabùb, Libya.] (Scegga-Altipiano Marm.)

LOWER MIOCENE

S. kewi Durham, 1961a:484-485, figs. 1B, 1E, 2C, pl. 67: figs. 2, 6, 9. [Costa Rica.]

EOCENE

S. damiani Jeannet, 1934a:388–389; 1934b:334–335. [Switzerland.]

Genus Metalia Gray

RECENT

M. latissima H. L. Clark, 1925a:215-216, pl. 11: fig. 7, pl. 12: figs. 1-2. [Tuticorin in south Madras, India.]

TERTIARY

M. dubia Arnold and H. L. Clark, 1934:153-154, pl. 5: figs. 4-6. [Jamaica, West Indies.]
M. jamaicensis Arnold and H. L. Clark, 1934:154-155, pl. 5: figs. 1-3. [Jamaica, West Indies.]

PLIOCENE

M. waylandi Stockley, 1927:116, pl. 21: figs. 4a-b. [Zanzibar Protectorate, East Africa.]

LOWER MIOCENE/OLIGOCENE

M. pelagica Nisiyama, 1968:299-300, pl. 27: figs.
1-5, pl. 29: fig. 4. [Saipan, Mariana Islands, western Pacific Ocean.] (Donny Fm. Aquitanian.)

OLIGOCENE

M. cartagensis Sánchez Roig, 1949:232-233. [Cuba.]

UPPER OLIGOCENE

M. palmeri Sánchez Roig, 1953c:166–167, pl. 10: fig. 3. [Cuba.]

Genus Prometalia Pomel

In the *Treatise*, Fischer (Durham et al., 1966:U597) considers *Prometalia* a subjective synonym of *Metalia*.

MIDDLE EOCENE

P. besairiei Lambert, 1933a:39-40, fig. 6. [Madagascar, off East Africa.] (Lutetian.)

Genus Migliorinia Checchia-Rispoli

EOCENE

Migliorinia Checchia-Rispoli, 1942:305–309. Typespecies: M. migiurtina Checchia-Rispoli, 1942: 305–309, figs. 1–3, pl. 1: figs. 1–10. [Somaliland, East Africa.]

Genus Pharaonaster Lambert

EOCENE

P migliorinii Checchia-Rispoli, 1941:388–391, figs. 1–2. [North Africa.]

Genus Thebaster Checchia-Rispoli

In the *Treatise*, Fischer (Durham et al., 1966:U601) considers this genus a subgenus of *Pharaonaster*.

EOCENE

Thebaster Checchia-Rispoli, 1941:393. Type-species: Macropneustes fischeri de Loriol. [Egypt.]

Genus Plagiobrissus Pomel

RECENT

P. pacificus H. L. Clark, 1940b:351, pl. 2: figs. 3-4. [Panama, Pacific Ocean side.]

MIOCENE

P. abeli Reidl, 1941:24-29, figs. 1-2. [Austria.]
P. costaricensis Durham, 1961a:485-487, figs. 1G, 1J, 2F, pl. 68: figs. 6, 9, 12. [Costa Rica.]
P. malavassii Durham, 1961a:487, figs. 1H, 1K, 2D, pl. 67: figs. 1, 3, 10, pl. 68: fig. 1. [Costa Rica.]

MIDDLE MIOCENE

P. lamberti Jeannet, 1928a:38-41, fig. 12, pl. 5: figs.
1-2, pl. 6: figs. 13-14; 1928b:220. [Venezuela.]
(Serie de Capadare, couches d'Ojo de Agua.)

OLIGOCENE

Eupatagus (Plagiobrissus) herrerae Sánchez Roig, 1951:46-47, pl. 25: figs. 1-2. [Cuba.]

E. (P.) santanae Sánchez Roig, 1951:47-48, pl. 37: fig. 2. [Cuba.]

EOCENE

- P. abruptus Arnold and H. L. Clark, 1927:71, pl. 18: figs. 4-5. [Jamaica, West Indies.]
- P. elevatus Arnold and H. L. Clark, 1927:71-72, pl. 19: figs. 2-4. [Jamaica, West Indies.]
- P. latus Arnold and H. L. Clark, 1927:72-73, pl. 18: figs. 6-7, pl. 19: fig. 1. [Jamaica, West Indies.]
- P. perplexus Arnold and H. L. Clark, 1927:74-75, pl. 20: fig. 6, pl. 21: figs. 1-2. [Jamaica, West Indies.]
- P. robustus Arnold and H. L. Clark, 1927:75, pl. 20: fig. 7, pl. 21: figs. 3-4. [Jamaica, West Indies.]

UPPER EOCENE

Eupatagus (Plagiobrissus) curvus Cooke, 1942:56-57, pl. 7: figs. 5-7. [U.S.A.]

- E. (P.) dixie Cooke, 1942:55-56, pl. 6: figs. 1-3. [U.S.A.]
- E. (P.) gardnerae Cooke, 1942:56, pl. 7: figs. 1-4. [U.S.A.]
- E. (P.) ocalanus Cooke, 1942:57, pl. 6: figs. 4-8. [U.S.A.]

Subgenus Plagiobrissus (Rhabdobrissus) Cotteau

UPPER EOCENE

Brissoides (Rhabdobrissus) aloysii Pijpers, 1933:89–91, figs. 154–155, pl. 1: fig. 18, pl. 2: figs. 7–9. [Netherland Antilles, Dutch West Indies.]

Genus Mortensenaster Lambert

EOCENE

M. barthouxi Lambert, 1931d:203, pl. 8: fig. 4. [Isthmus of Suez, Red Sea area.]

Genus Plesiaster Pomel

UPPER CRETACEOUS

Micraster (Plesiaster) americanus Stephenson, 1941: 69-70, pl. 7: figs. 1-4. [U.S.A.] (Navarro Group. Maestrichtian.)

Genus Plesiopatagus Pomel

MIDDLE EOCENE

P. hourcqi Lambert, 1933a:38, pl. 4: fig. 22. [Madagascar, off East Africa.] (Lower Lutetian.)

Genus Rhynobrissus A. Agassiz

RECENT

R. macropetalus H. L. Clark, 1938:434-435, pl. 28: figs. 8-9. [Western Australia.]

UPPER MIOCENE

R. rostratus Cooke, 1961:29, pl. 14: figs. 1-4. [Venezuela.]

Genus Rojasia Sánchez Roig

EOCENE

Rojasia Sánchez Roig, 1951:57. Type-species: R. rojasi Sánchez Roig, 1951:58, pl. 35, pl. 36: fig. l. [Cuba.]

Genus Spatagobrissus H. L. Clark

RECENT

Spatagobrissus H. L. Clark, 1923:402–404. Typespecies: S. mirabilis H. L. Clark, 1923:402, pl. 23: figs. 1–2. [South Africa.]

Genus Spatangomorpha Böhm

MIDDLE EOCENE

Eupatagus (Spatangomorpha) pinarensis Sánchez Roig, 1953c:157, pl. 7: figs. 3-4. [Cuba.]

Genus Taimanawa Henderson and Fell

TERTIARY

T. mortenseni Henderson and Fell, 1969:12-14, fig. 2b, pl. 5: fig. 1. [New Zealand.]

LOWER MIOCENE

Taimanawa Henderson and Fell, 1969:3-6. Type-species: T. pulchella Henderson and Fell, 1969: 6-9, figs. 1, 2a, 2c, pl. 2: fig. 2, pls. 3-4. [New Zealand.]

Family UNIFASCIIDAE Cooke

UNIFASCIIDAE Cooke, 1959:79. Type-genus: *Unifas-cia* Cooke. [Fischer (Durham et al., 1966:U582) in the *Treatise* considers this family a synonym of Brissidae Gray.]

Genus Unifascia Cooke

MIDDLE EOCENE

Unifascia Cooke, 1959:79-80. Type-species: Macropneustes carolinensis Clark. [North Carolina, U.S.A.] (Castle Hayne Ls.)

Family SPATANGIDAE Gray

Genus Spatangus Leske

RECENT

- S. beryl Fell, 1963b:5-6, pl. 1: fig. 1, pl. 4: figs. 8-9, pl. 5: figs. 10-11, 13. [New Zealand.]
- S. diomedeae Fell, 1963b:5-7. [Philippine Islands.]
- S. multispinus Mortensen, 1925:413–415, figs. 68–69. [Pacific Ocean.]
- S. thor Fell, 1963b:3-5, fig. 1, pl. 1: fig. 2, pl. 3: figs. 6-7, pl. 5: fig. 12. [New Zealand.]

UPPER MIOCENE

S. glenni Cooke, 1959:80, pl. 35: figs. 1–5. [South Carolina, U.S.A.]

UPPER EOCENE

S. tapinus Schenck, 1928:198-199, pl. 24: figs. 1-4. [California, U.S.A.] (Tejon Fm.)

UPPER CRETACEOUS

S. baixadoleitensis Maury, 1934a:156-157, pl. 16: fig. 1. [Rio Grande do Norte, Brazil.] (Probably Turonian.)

Genus Prospatangus Lambert

In the *Treatise*, Fischer (Durham et al., 1966:U605) considers *Prospatangus* a synonym of *Spatangus* Gray.

MIOCENE

- P. acuminatus Szörényi, 1953:39, 91, pl. 7: figs. 5-5a. [Ukraine.]
- P. fothiensis Strauz, 1925:368-369, fig. 24. [Hungary. Another pagination given could be 214-215, fig. 24.]
- P. hungaricus Vadász var. bukkensis Kutassy, 1928: 257–258. [Hungary.]

MIDDLE MIOCENE

- P. cotteaui Lambert, 1928b:121-124. [France.] (Helvetian.)
- P. venzoi Laureri, 1962:100-101, pl. 2: figs. 2-2a, pl. 4: fig. 2. [Italy.] (Helvetian.)

Genus Atelospatangus Koch

MIDDLE EOCENE

A. magnus Szörényi, 1963:192–193, pl. 15: figs. 5–7. [Hungary.]

Genus Hemimaretia Mortensen

RECENT

Hemimaretia Mortensen, 1950b:160. Type-species: Marietia elevata Döderlein. [East Africa.]

Genus Maretia Gray

RECENT

M. parvituberculata H. L. Clark, 1925c:13–15, pl.4. [Off Natal Coast, South Africa.]

M. cordata Mortensen, 1948a:132-133. [Philippine Islands.]

MIOCENE

M. estenozi Sánchez Roig, 1926:111-112, pl. 37: figs. 1-2. [Havana, Cuba.]

Genus Hemipatagus Desor

In the *Treatise*, Fischer (Durham et al., 1966:U609) considers *Hemipatagus* a subjective synonym of *Maretia* Gray.

PLIOCENE

H. bandaensis Martin in Martin and Jeannet, 1937:276, figs. 53a-c. [Dutch East Indies, western Pacific Ocean.]

UPPER OLIGOCENE

H. cartagensis Sánchez Roig, 1949:216–217. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949:323) says it is Upper Oligocene.]

Genus Nacospatangus A. Agassiz

Subgenus Pseudomaretia Koehler

RECENT

P. oblonga Mortensen, 1950b:163. [Galápagos Islands, southeast Pacific Ocean.]

Genus Paramaretia Mortensen

RECENT

Paramaretia Mortensen, 1950b:160. Type-species: P. multituberculata Mortensen, 1950b:160. [New South Wales, Australia.]

Subgenus Atelospatangus (Semipecalion) Szörényi

UPPER EOCENE

Atelospatangus (Semipetalion) Szörényi, 1963: 193–194. Type-species: A. (S.) anomon Szörényi, 1963:195–196, pl. 15: figs. 1–4. [Hungary.]

Family LOVENIIDAE Lambert

Genus Lovenia Desor

RECENT

- L. doederleini Mortensen, 1950b:158. [Kei Islands, Malay Archipelago.]
- L. doederleini Mortensen var. acuminata Mortensen, 1948a:138. [Philippine Islands.]
- L. hawaiiensis Mortensen, 1950b:158. [Hawaiian Islands, Pacific Ocean.]

MIOCENE

- L. gigantae H. L. Clark, 1945:325-326, pl. 43: fig. F. [Fiji, South Pacific Ocean.]
- L. minihagali Deraniyagala, 1961:154, pl. 5: fig. 9. (Ceylon, Indian Ocean.)
- L. similis H. L. Clark, 1945:327-328, pl. 43: fig. G. [Fiji, South Pacific Ocean.]

MIDDLE MIOCENE

L. mortenseni Čtyroký, 1965:108-118, figs. 1-6, pls. 1-6. [Czechoslovakia.] (Carpathian Fm.)

OLIGOCENE

L. mexicana Jackson, 1937:236-237, pl. 15: figs. 2-3. [Mexico.]

UPPER OLIGOCENE

L. alabamensis Cooke, 1959:77, pl. 32: figs. 14-17. [Alabama, U.S.A.] (Chickasawhay Ls.)

UPPER EOCENE

L. macrotuberculata Schaffer, 1960:431–434, figs. e-g. [Austria.]

UPPER CRETACEOUS

L. baixodoleitensis Maury, 1934a:156, pl. 15: fig.
1. [Brazil, Rio Grande do Norte. Maury (1934b:3) made this species the type-species of a new genus Lovenilampas, which Kier (Durham et al., 1968: U523) put in incertae sedis.] (Probably Turonian.)

Genus Breynia Desor

PLIOCENE

- B. australasiae Leach var. aroensis Currie, 1924: 64–66, pl. 4: fig. 6. [Aru Islands, off southwest coast of New Guinea.]
- B. cordata Hayasaka and A. Morishita, 1947:122–124, pl. 10: fig. 1, pl. 11: fig. 1. [China.]
- B. testudinaria Hayasaka and A. Morishita, 1947: 125–126, pl. 11: fig. 2. [China.]
- B. birmanica Vredenburg, 1922:413, pl. 30: fig. 1. [Burma.]

UPPER EOCENE

B. sirtica Airaghi, 1939:281–282, pl. 12: figs. 17–18. [North Africa.]

Genus Echinocardium Gray

RECENT

- E. connectens Mortensen, 1933:469-470, fig. 28. [St. Helena (Island), South Atlantic Ocean.]
- E. fenauxi Péquignat, 1963:3-8, figs. 1-3; 1964: 5-14, figs. 1-4, 5a, pls. 1-2. [South of France to Ligurian Sea.]
- E. keiense Mortensen, 1950b:163. [Kei Islands, Malay Archipelago.]

Genus Homolampas A. Agassiz

RECENT

H. lovenioides Mortensen, 1948a:117–118. [Philippine Islands.]

Suborder ASTEROSTOMATINA A. G. Fischer

Family ASTEROSTOMATIDAE Pictet

Genus Asterostoma Agassiz

MIDDLE EOCENE

- A. dickersoni Sánchez Roig, 1949:180–181, pl. 31: fig. 1, pl. 32: fig. 1. [Cuba. Although Sánchez Roig says it is Upper Eocene, Brodermann (1949: 317) says it is Middle Eocene.]
- A. irregularis Sánchez Roig, 1952b:7–8, pls. 2–3. [Cuba.]
- A. subcircularis Sánchez Roig, 1952c:19-20, pl. 2: figs. 1-2, pl. 11: fig. 1. [Cuba.]

Genus Antillaster Lambert

MIOCENE

A. lamberti Jeannet, 1928b:220. [Venezuela.]

MIDDLE MIOCENE

A. lamberti Jeannet, 1928a:36–37, pl. 4: figs. 14–15. [Venezuela.] (Serie Capadare, couches d'Ojo de Agua.)

LOWER MIOCENE

A. jaumei Sánchez Roig, 1953a:64-65, pl. 15(pars). [Cuba.]

OLIGOCENE

- A. depressus Sánchez Roig, 1951:51, pl. 29: fig. 1. [Cuba.]
- A. giganteus Sánchez Roig, 1951:48-49. [Cuba.]
- A. herrerae Sánchez Roig, 1951:49–50, pl. 27: fig.1, pl. 28: fig. 1. [Cuba.]
- A. mortenseni Sánchez Roig, 1952c:20-21, pl. 14: figs. 2-3. [Cuba.]
- A. rojasi Sánchez Roig, 1951:50-51, pl. 37: fig. 1, pl. 38: fig. 2. [Cuba.]

UPPER OLIGOCENE

A. brachypetalus Sánchez Roig, 1952b:8-9, pl. 7: fig. 1. [Cuba.]

- A. cartagensis Sánchez Roig, 1949:188-189, pl. 22: fig. 2. [Cuba.]
- A. estenozi Sánchez Roig, 1949:189-190, pl. 22: fig. 1. [Cuba.]
- A. expansus Sánchez Roig, 1953a:63-64, pl. 18. [Cuba.]
- A. guevarai Sánchez Roig, 1952b:9-10, pl. 4: figs.1-2. [Cuba.]

EOCENE

A. arnoldi H. L. Clark in Arnold and Clark, 1927: 62-63, pl. 15: fig. 3, pl. 16: figs. 16-17. [Jamaica, West Indies.]

UPPER EOCENE

A. bonairensis Pijpers, 1933:88, pl. 2: figs. 1-3. [Dutch West Indies, Netherland Antilles.]

Genus Brissolampas Pomel

UPPER OLIGOCENE

B. santanae Sánchez Roig, 1949:190-191, pl. 22: figs. 3-4. [Cuba.]

Genus Heterobrissus Manzoni and Mazzetti

MIOCENE

H. cypriotes Currie, 1935b:32-33, pl. 3: figs. 1-1b.[Cyprus, eastern Mediterranean Sea.] (Facies I of Idalian Series.)

Genus Archaeopneustes Gregory

In the *Treatise*, Fischer (Durham et al., 1966:U622) considers *Archaeopneustes* a subjective synonym of *Heterobrissus* Manzoni and Mazzetti.

LOWER PLIOCENE

A. moorefieldi Hall, 1966:1124-1125, pl. 145: figs.1-3. [California. U.S.A.]

Genus Linopneustes A. Agassiz

RECENT

L. brachypetalus Mortensen, 1950b:157. [New South Wales, Australia.]

Genus Megapetalus H. L. Clark

UPPER MIOCENE

Megapetalus H. L. Clark, 1929:259-260. Typespecies: M. lovenioides H. L. Clark, 1929: 260-261, pl. 31: figs. 1-6. [California, U.S.A.]

Genus Moronaster Sánchez Roig

EOCENE

Moronaster Sánchez Roig, 1952b:13–14. Typespecies: M. moronensis Sánchez Roig, 1952b: 14–15, pl. 9: figs. 1–2. [Cuba.]

Genus Paleopneustes A. Agassiz

RECENT

P. tholoformis Chesher, 1968a:125–134, fig. 25, pl. 27, pl. 28: figs. e, f, pl. 29: figs. a, f. [Florida Strait to Barbados, Caribbean Sea.]

PLIOCENE

- P. periturus Nisiyama, 1968:165-167, figs. 61a-c. [Japan.] (Kiwada Fm.)
- P. psoidoperiodus Nisiyama, 1968:162–164, figs. 60a-c. [Japan.] (Nakamura Fm.)

LOWER PLIOCENE

P. holmani Grant and Hertlein, 1938b:112–113, pl. 25: figs. 1–2. [California, U.S.A.] (Repetto Fm.)

MIOCENE

P. lepidus Nisiyama, 1968:167-168, pl. 20: figs. 1,4, pl. 21: fig. 1. [Japan.] (Nanao Fm.)

UPPER OLIGOCENE

P. elevatus Israelsky, 1924:144, pl. 4: figs. la-b. [Mexico.]

Subgenus Paleopneustes (Oopneustes) Nisiyama

MIDDLE MIOCENE

Paleopneustes (Oopneustes) Nisiyama, 1968:159. Type-species: P. (O.) priscus Nisiyama, 1968: 159-162, figs. 57-59, pl. 19: figs. 1-2, pl. 21: fig. 4. [Japan.] (Tsunaki Fm.)

Genus Platybrissus Grube

PLEISTOCENE

P. parvus H. L. Clark, 1945:322-323, pl. 42: figs. J-K. [Fiji, South Pacific Ocean.]

Subgenus Platybrissus (Eurypatagus) Mortensen

RECENT

Eurypatagus Mortensen, 1948a:133-134. Typespecies: E. ovalis Mortensen, 1948a:134. [Philippine Islands.]

E. grandiporus Mortensen, 1948b:12, pl. 1: figs. 4-5. [Indian Ocean.]

Genus Plesiozonus de Meijere

RECENT

P. diomedeae Mortensen, 1948a:118-119. [Philippine Islands.]

Genus Pseudoasterostoma Sánchez Roig not Pseudoasterostoma Duncan, 1889

Presumably Sánchez Roig did not know that *Pseudoasterostoma* was preoccupied when he described his new genus. If his type-species is generically distinct, then a new generic name should be erected for it. In the *Treatise*, Fischer (Durham et al., 1966:U624) considers *Pseudoasterostoma* Duncan an objective synonym of *Prosostoma* Pomel.

OLIGOCENE

Pseudoasterostoma Sánchez Roig, 1952b:5-6, pl. 1: fig. 1. Type-species: Asterostoma cubensis Cotteau. [Cuba.]

UPPER OLIGOCENE

P. fernandezi Sánchez Roig, 1952b:6, pl. 6: fig. 1. [Cuba.]

P. habanensis Sánchez Roig, 1952b:6-7, pl. 5: fig. 1. [Cuba.]

Genus Scrippsechinus Allison, Durham and Mintz

RECENT

Scrippsechinus Allison, Durham and Mintz, 1967:16. Type-species: S. fisheri Allison, Durham and Mintz, 1967:16–22, figs. 13–14, 21–32. [West from Chile.]

Suborder Uncertain

Family Uncertain

Genus Barnumia Cooke

UPPER CRETACEOUS

Barnumia Cooke, 1953:29-30. Type-species: B. browni Cooke, 1953:30, pl. 16: figs. 2-5. [Guatemala.] (Campanian?)

Subgenus Cottreaucorys (Cordastrum) Nisiyama

UPPER CRETACEOUS

Cottreaucorys (Cordastrum) Nisiyama, 1968:175. Type-species: C. (C.) sulcatus Nisiyama, 1968: 175-177, figs. 65a-c, pl. 18: figs. 10-11, pl. 20: fig. 2. [Japan.] (Miyakura Fm. Maestrichtian-Senonian.)

Genus Gonzalezaster Sánchez Roig

EOCENE

Gonzalezaster Sánchez Roig, 1952b:15-16. Typespecies: Nudobrissus lamberti Sánchez Roig.

(Roig, Torreia, Cuba No. 17:16, pl. 8: figs. 1, 4). [Cuba.]

Genus Homoeopetalus Arnold and H. L. Clark

TERTIARY

Homoeopetalus Arnold and H. L. Clark, 1934:146. Type-species: H. axiologus Arnold and H. L. Clark, 1934:147-148, pl. 2: figs. 2-3. [Jamaica, West Indies.]

Genus Nudobrissus Lambert

UPPER/MIDDLE EOCENE

N. lamberti Sánchez Roig, 1949:222-223, pl. 36: figs. 1-3. [Cuba. Brodermann (1949:324) says it is Middle to Upper Eocene.]

Order NEOLAMPADOIDA Philip

Suborder NEOLAMPADINA Philip

Neolampadina Philip, 1963a:725. Type-genus: Neolampas A. Agassiz.

Family NEOLAMPADIDAE Lambert

Genus Nannolampas Mortensen

RECENT

Nannolampas Mortensen, 1948c:339. Type-species: Neolampas tenera de Meijere. [Timor Sea, part of Indian Ocean.]

Genus Notolampas Philip

LOWER MIOCENE

Notolampas Philip, 1963a:719-720. Type-species: N. flosculus Philip, 1963a:720-722, fig. 2, pl. 107: figs. 1-10. [South Australia.]

Genus Pisolampas Philip

UPPER EOCENE

Pisolampas Philip, 1963a:718. Type-species: P. concinna Philip, 1963a:719, fig. 1, pl. 106, pl. 107: fig. 11. [South Australia.]

Superclass GNATHOSTOMATA or ATELOSTOMATA

Order Uncertain

Genus Menopygus Pomel

LOWER JURASSIC

M. hebbriensis Lambert, 1933b:57-58, pl. 1: figs. 8-9. [North Africa.] (Lower Domerian.)

Doubtful Nominal Genera of Echinoids

Genus Neopatagus Sánchez Roig

OLIOGOCENE

Neopatagus Sánchez Roig, 1953b:258-259. Typespecies: Breynia cubensis Cotteau. [Cuba.]

Genus Oligopodia Duncan

PLIOCENE

O. okinawa Cooke, 1954:49, pl. 12: figs. 7-10. [Okinawa, Japan.] (Naha Ls. is lower part of Ryukyu Ls.)

MIOCENE

O. tapeina H. L. Clark, 1945:321-322, pl. 42: figs. G-I. [Fiji, South Pacific Ocean.]

UPPER EOGENE

O. mortenseni Castex, 1947:32, pl. 2: figs. 1-4. [France.] (Base du Calcaire de St.-Éstephe.)

Literature Cited

Adkins, W. S.

1928. Handbook of Texas Cretaceous Fossils. The University of Texas Bulletin (Austin), 2838:1-385, figure 1, plates 1-37.

1930. Texas Comanchean Echinoids of the Genus Macraster. The University of Texas Bulletin, 3001:101-120, plates 10-11.

Airaghi, C.

1934. Echinidi paleogenici della Sirtica e del Fezzan orientale. Missione Scientifica della Reale Accademia d'Italia a Cufra (1931-IX), Viaggi di Studio ed Esplorazioni, 3:63-81, plate 5.

1939. Echinidi Cretacici e Tertziari della regione di Orfella e della Sirtica. Annali del Museo Libico di Storia Naturale (Tripoli), 1:253-286, plates 10-11.

Alberti, A.

1950. Su una nuova specie di Heteraster. Bollettino dell'Ufficio Geologico d'Italia, 70(6):133-136, plate 1.

Allison, E. C., J. W. Durham, and L. W. Mintz

1967. New Southeast Pacific Echinoids. Occasional Papers of the California Academy of Sciences, 62:1-23, figures 1-32.

Anderson, F. M.

1958. Upper Cretaceous of the Pacific Coast. The Geological Society of America, Memoir, 71:1-378, figures 1-3, plates 1-75.

Argamakova, V.

1934. Some Echinoidea of the Neogene of Sakhalin. Transactions of the Oil Geological Institute, (A)41:1-44, figures 1-16, plates 1-2.

Arnold, B. W., and H. L. Clark

1927. Jamaican Fossil Echini: With Descriptions of New Species of Cainozoic Echinoidea by H. L. Hawkins. *Memoirs of the Museum of Comparative Zoology* (Harvard), 50(1):1-84, figures 1-3, plates 1-22.

1934. Some Additional Fossil Echini from Jamaica. Memoirs of the Museum of Comparative Zoology (Harvard), 54(2):139-156, plates 1-5.

Assmann, P.

1925. Die Fauna der Wirbellosen und die Diploporen der oberschlesischen Trias mit Ausnahme der Brachiopoden, Lamellibranchiaten, Gastropoden und Korallen. Jahrbuch der PreuBischen Geologischen Landesanstalt zu Berlin, 46:504-527, plates 8-9.

1937. Revision der Fauna der Wirbellosen der oberschlesischen Trias. Abhandlungen der PreuBischen Geologischen Landesanstalt, 170:1-134, plates 1-21.

Baker, A. N.

1967. Two New Echinoids from Northern New Zealand, Including a New Species of Diadema. Transactions

of the Royal Society of New Zealand, Zoology, 8(23):239-245, 1 figure, plates 1-3.

1968. A New Cidarid Echinoid from Northern New Zealand. Transactions of the Royal Society of New Zealand, Zoology, 10(21):199-203, figure 1, plate 1.

1969. Two New Heart-Urchins, Including a New Species of Cyclaster, from New Zealand Waters (Echinoidea) Spatangoida). Records of the Dominion Museum, 6(16):265-273, figures 1-22, plates 1-2.

Bantz, H.-U.

1969. Echinoidea aus Plattenkalken der Altmühlalb und ihre Biostratinomie. Erlanger Geologische Abhandlungen, 78:1-35, figure 1, plates 1-7.

Baranova, Z. I.

1955. New Species and Subspecies of Echinoderms from the Bering Sea. Travaux de l'Institut Zoologique, Academie des Sciences de l'URSS, 18:334-342, figures

1957. Echinoderms of the Bering Sea. Investigations of Far-East Seas, 4:149-266, figures 1-19.

Barbu, V., and V. Dragoş

1957. Noi forme de Scutellina din Eocenul de Nord-Vest al Transilvanici. Buletin Stiintific, Sectia de Geologie și Geografie, 2(3-4):643-655, plates 1-3.

Barry, J. O'Keefe, and R. J. LeBlanc

1942. Lower Eocene Faunal Units of Louisiana. State of Louisiana Department of Conservation Geological Bulletin, 23:1-156, figures 1-5, plates 2-19.

Basse, E.

1928. Quelques invertébrés crétacés de la Cordillère Andine. Bulletin de la Société Géologique de France, (4)28(3-5):113-147, figures 1-20, plates 7-8.

Bather, F. A.

1929. XXX.-Abh: Triassic Echinoderms of Timor. Paläontologie von Timor nebst kleineren beiträgen zur Paläontologie einiger anderen inseln des ostindischen archipels (Stuttgart), 16:215-272, plates 257-258.

1934. Chelonechinus n. g., a Neogene Urechinid. Bulletin of the Geological Society of America, 45(5):799-874, figures 1-18, plates 108-110.

Bather, F. A., and W. K. Spencer

1934. A New Ordovician Echinoid from Girvan, Ayrshire.

The Annals and Magazine of Natural History, (10)
13(77):557-558.

Belanski, C. H.

1928. The Shellrock Stage of the Devonian of Iowa. The American Midland Naturalist, 11(5):165-170.

Bernasconi, I.

1947. Una nueva especie de "Mellita" en la Republica Argentina. Physis, 20:117-118.

- 1954. Notas sobre una nueva especie de equinoideo fósil de Tierra del Fuego. *Physis* (Buenos Aires), 20(59): 397-400, plate 1.
- 1955. Una nueva especie de Diadematidae tropical. Neotropica, 1(6):92.
- 1956. Dos nuevos Equinodermos de la costa del Brasil. Neotropica, 2(8):33-36, figures 1-2.

Besairie, H.

- 1930. Recherches géologiques à Madagascar: Contribution à l'étude des ressources minérales. Bulletin de la Société d'Histoire Naturelle de Toulouse, 60(2):1-272, figures 1-17, plates 1-27.
- 1936. Recherches géologiques à Madagascar, I: La Géologie du Nord-Ouest. Mémoires de l'Académie Malgache, 21:9-259, figures 1-16, plates 1-24.

Besairie, H., and J. Lambert

1930. Notes sur quelques échinides de Madagascar et du Zululand. Bulletin de la Société géologique de France, (4)30:107-117, plates 9-10.

Beurlen, K.

- 1934. Monographie der Echinoiden-Familie Collyritidae d'Orb. *Palaeontographica*, 80A(3-4):41-194, figures 1-46.
- 1966. Novos Equinóides no Cretáceo do Nordeste do Brasil. Anais da Academia Brasileira de Ciências, 38(3/4):455-464, figures 1-4, plate 1.

Bindemann, W.

1938. Ein Echinid mit Laterne aus dem Kulm von Herborn, Meekechinus? herbornensis n. sp. Senckenbergiana, 20(3/4):203-220, figures 1-2, plates 1-4.

Blanckenhorn, M. 1925 [1924]. Die Seeigelfauna der Kreide Palästinas. *Palaeontographica* (Stuttgart), 67(4–5):83–113, plates

Böhm, J.

1927. Beitrag zur Kenntnis der Senonfauna der bithynischen Halbinsel. *Palaeontographica* (Stuttgart), 69: 187-222, figures 1-3, plates 11-18.

Boni, A.

1939. Fauna anisica pigmea scoperta nelle prealpi bresciane. Bollettino della Società Geologica Italiana, 58(2,3): 321-428, plates 17-22.

Boos, M. F.

1929. Stratigraphy and Fauna of the Luta Limestone (Permian) of Oklahoma and Kansas. *Journal of Paleontology*, 3(3):241-253, figures 1-3, plate 27.

Brighton, A. G.

- 1925. On Some Cretaceous Echinoids from Nigeria. Geological Survey of Nigeria, Occasional Paper, 3:1-21, figures 1-5.
- 1926a. A New Miocene Echinoid from N. W. Peru. Geological Magazine, 63(740):61-69, figures 1-7, plates 3-5.
- 1926b. Eocene Echinoids from N. W. Peru. Geological Magazine, 63(746):359-371, figures 1-3, plate 26.

Brito, I. M.

1959. Sôbre una nova Clypeaster do Brasil (Echinoidea Clypeasteroidea). Centro de Estudos Zoológicos Universidade de Brasil, 1:1-4, figure 1, plates 1-2.

1964. Equinoides cretácicos do Estado da Bahia. Publicação Avulsa, Universidade da Bahia, Escola de Geologia, 1:1-10, plates 1-2.

Brodermann, J.

1949. Significacion Estratigrafica de los Equinodermos Fosiles Cubanos. In Sánchez Roig, M., "Los equinodermos fosiles de Cuba." Paleontologia Cubana, 1:305-330.

Brotzen, F.

1959. On Tylocidaris Species (Echinoidea) and the Stratigraphy of the Danian of Sweden, with a Bibliography of the Danian and the Paleocene. Sveriges Geologiska Undersökning, (C)54(2):1-81, figures 1-19, plates 1-3.

Brown, I. A.

1967. A Devonian Echinoid from Taemas, South of Yass, N. S. W. Proceedings of the Linnean Society of New South Wales, 92 (2), 414:157-161, figures 1-2, plate 4.

Brunnschweiler, R. O.

1962. On Echinoids in the Tertiary of Western Australia with a Description of two New Eocene Fibulariidae.

Journal of the Geological Society of Australia, 8:159–169, figures 1-3.

Buitrón, B. E.

1970. Equinoides del Cretácico inferior de la région de San Juan Raya-Zapotitlán, Estado de Puebla. Universidad Nacional Autónoma de México, Instituto de Geología, Paleontología Mexicana, 30:1-64, figure 1, plates 1-9.

Callegari, P.

1930. Su alcuni echinidi miocenici di S. Severino Marche.

Memorie dell'Istituto Geologico della R. Università
di Padova, 9:1-24, plate 1.

Carter, C. S.

1928. The White Chalk of Lincolnshire. Lincolnshire Naturalists' Union, Trausaction, 1928, 7:45-69.

Casey, R.

1960. A New Echinoid from the lower Cretaceous (Albian) of Kent. *Palaeontology*, (3)3:260-264, figure 1, plate 44.

Castex, L.

- 1930. Révision des Échinides du Nummulitique du départment des Landes. Actes de la Société Linnéenne de Bordeaux, 82:5-72, plates 1-4.
- 1947. Notes sur quelques échinides fossiles du sud-ouest de la France. Actes de la Société Linnéenne de Bordeaux, 93:25-42, plates 1-2.

Chao, K.

1942. On the Occurrence of Melonechinus in Kuangsi, China. Bulletin of the Geological Society of China, 22(3-4):201-204, figure 1.

Chapman, F., and F. A. Cudmore

1934. The Cainozoic Cidaridae of Australia. Memoirs of the National Museum Melbourne, 8:126-149, plates 12-15.

Checchia-Rispoli, G.

- 1921. Fauna del Neocretacico della Tripolitania: Echinidi.

 Memorie per servire alla Descrizione della Carta

 Geologica d'Italia, 8(2):1-31, figures 1-2, plates 7-9.
- 1923. Sopra due Clipeastri del Miocene Medio della Sar-

- degna. Bollettino del Royal Ufficio geologico d'Italia, 49(4):1-8, 5 figures, 1 plate.
- 1925. Illustrazione dei clipeastri miocenici della Calabria seguita da una studio sulla morfologia interna e sulla classificazione dei clipeastri. Memorie per servire alla descrizione della Carta Geologica d'Italia, 9(3):1-75, figures 1-21, plates 1-24.
- 1927. Illustrazione degli echinidi cenozoici della Cirenaica raccolti dall'Ing. C. Crema, III: Generi "Schizaster" e "Trachyaster." Bollettino del Royal Ufficio geologico d'Italia, 52(3):1-6, figures 1-3, plate 1.
- 1928. Sopra alcuni "Stolonoclypus" del miocene medio della Sardegna. Bollettino del Royal Ufficio geologico d'Italia, 53(3):1-20, figures 1-4, plates 1-3.
- 1929a. Illustrazione degli Echinidi cenozoici della Cirenaica raccolti dell'Ing. C. Crema. Bollettino del Royal Ufficio geologico d'Italia, 54(3):1-8, plate 1.
- 1929b. Nuove osservazioni sulla struttura interna dei Clypeastri. *Palaeontographia Italica*, 29–30:25–29, figure 1, plate 2.
- 1930a. Su di un echinide tetramero del Cretaceo della Tripolitania. Bollettino della Società Geologica Italiana, 49:79-82, plate 8.
- 1930b. Sul genere "Noetlingaster" Vredenburg. Bollettino del Royal Ufficio geologico d'Italia, 55(10):1-24, 14 figures, plates 1-4.
- 1931. Sopra alcuni spatagoidi del Maestrichtiano della Tripolitania. Bollettino del Royal Ufficio geologico d'Italia, 56(5):1-14, figures 1-3, plate 1.
- 1932a. Echinidi regolari del Maestrichtiano della Tripolitania. Bollettino del Royal Ufficio geologico d'Italia, 57(3):1-16, 6 figures, plates 1-2.
- 1932b. "Sanfilippaster," nuovo genere di Echinide del Cretaceo superiore. Atti della Reale Accademia Nazionale dei Lincei, (6)15(4):313-316.
- 1932c. Su alcuni Echinidi Cretacei della Tripolitania. Memorie della Reale Accademia d'Italia, 3(4):373-391, plates 1-3.
- 1933a. Echinidi cretacei della Tripolitania. Bollettino del Royal Ufficio geologico d'Italia, 58(9):1-14, plates 1-2.
- 1933b. Illustrazione di alcuni Echinidi del Maestrichtiano della Tripolitania raccolti de Ignazia Sanfilippo. *Memorie della Società Geologica Italiana*, 1:1-24, figures 1-8, plates 1-2.
- 1936. Su alcuni Echinidi della Sicilia. Bollettino della Società Geologica Italiana, 55:295-310, plates 16-17.
- 1938. Di alcuni Clipeastri del Miocene del Monte Gargano.

 Bollettino della Società Geologica Italiana, 57(1):4548, plate 2.
- 1940a. Su alcuni Clipeastri Miocenici della Calabria. Atti Accademia della Scienze Fisiche e Matematiche Napoli, (3)1(7):1-15, figures 1-7, plates 1-3.
- 1940b. Su alcuni Echinidi del Malm della Sicilia. Bollettino della Società di Scienze Naturali ed Economiche di Palermo, (new series)22:23-25, figure 1.
- 1941. Osservazioni su alcuni generi di Antillasterinae. Rendiconti del'Accademia Nazionale dei Lincei, (7)2: 388-393, figures 1-2, plate 1.
- 1942. "Migliorinia," nuovo genere di Echinide dell'Eocene

- della Migiurtina. Rendiconti della Reale Accademia d'Italia, (7)3:305-309, figures 1-3, 1 plate.
- 1943a. Brissoidi eocenici della Migiurtina. Memorie della Reale Accademia d'Italia, 14(8):99-111, plates 1-3.
- 1943b. Osservazioni su alcuni Pseudodiademinae. Reale Accademia d'Italia, (7)4:317-321, 1 figure.
- 1945 [1943]. Di due nuovi generi di Echinidi del Cretaceo della Somalia. Bollettino del'Ufficio geologico d'Italia, 68(8):81-90, figures 1-2, plates 1-2.
- 1947a. Monografia degli "Epiaster" della Somalia Italiana. Atti della Accademia Nazionale dei Lincei (Memorie), (8)1/2:1-23, plates 1-2.
- 1947b. Sul genere "Brissopatagus" Cotteau. Rendiconti della Accademia Nazionale dei Lincei, (8)2(5):516-520, plate 1.
- 1948. "Salenia Hawkinsi," nuovo echinide del Cenomaniano della Somalia. Rendiconti dell'Accademia Nazionale dei Lincei, (8)4:169-172, 2 figures, 1 plate.
- 1950a [1945–1946]. Su alcuni echinidi eocenici della Migiurtinia. Bollettino dell'Ufficio geologico d'Italia, 70:21–39, plates 1–2.
- 1950b. Su alcuni echinidi eocenici della Migiurtinia. Bollettino dell'Ufficio geologico d'Italia, 70(2):21-43, plates 1-2.

Cherbonnier, G.

- 1959a. Échinides: Expédition Océanographique Belge dans les Eaux Côtières Africaines de l'Atlantique Sud (1948-1949). Institut Royal des Sciences Naturelles de Belgique, Résultats Scientifiques, 3(6):35-59, figure 1, plates 1-10.
- 1959b. Échinodermes de la Guyane française (Crinoides, Astérides, Ophiurides, Échinides, Holothurides). (Note 4.) Bulletin du Muséum National d'Histoire Naturelle, (2)31:367-372, figures 8-9.

Chesher, R. H.

- 1968a. The Systematics of Sympatric Species in West Indian Spatangoids: A Revision of the Genera Brissopsis, Plethotaenia, Paleopneustes, and Saviniaster. Studies in Tropical Oceanography (Institute of Marine Sciences, University of Miami), 7:1-168, figures 1-25, plates 1-35.
- 1968b. Lytechinus williamsi, a New Sea Urchin from Panama. Breviora, 305:1-13, figures 1-5.
- 1970. Evolution in the Genus Meoma (Echinoidea: Spatangoida) and a Description of a New Species from Panama. Bulletin of Marine Science, 20(3):731-761, figures 1-9. (Biological Results of the University of Miami Deep-sea Expeditions, 68.)

Chiplonker, G. W.

- 1937. Echinoids from the Bagh Beds. Proceedings of the Indian Academy of Sciences, B6(1):60-71, plate 6.
- 1939. Echinoids from the Bagh Beds, Part II. Proceedings of the Indian Academy of Sciences, B9(5):236-240, plate 25.

Chiriac, M.

1956. Contribution à l'étude de la faune des échinides crétaciques de la Dobrogea du Sud. Bulletin Stiintisic, Academia Republicii Populare Romine, 1(1): 69-105, plates 1-13.

1957. Contributions à l'étude de la faune des Échinides Crétacés de la Dobrogea du Sud. Revue de Géologie et de Géographie, Académie de la République Populaire Roumaine, 1:61-95, plates 1-13.

Clark, A. H.

- 1932. Echinoderms from the Islands of Niuafoou and Nukualofa, Tonga Archipelago, with the Description of a New Genus and Two New Species. *Proceedings of the United States National Museum*, 2905, 80(5): 1-12, plates 1-8.
- 1934. A New Sea-Urchin from Florida. Journal of the Washington Academy of Sciences, 24(1):52-53.
- 1939. Echinoderms (other than Holothurians) Collected on the Presidential Cruise of 1938. Smithsonian Miscellaneous Collections, 98(11):1-18, plates 4-5.
- 1946. Echinoderms from the Pearl Islands, Bay of Panama, with a revision of the Pacific Species of the Genus Encope. Smithsonian Miscellaneous Collections, 106(5):1-11, plates 1-4.

Clark, A. M.

1955. Echinodermata of the Gold Coast. Journal of the West African Science Association, 1(2):16-56, figures 1-23, plate 2.

Clark, H. L.

- 1923. The Echinoderm Fauna of South Africa. Annals of the South African Museum, 13:221-435, 4 figures, plates 8-23.
- 1925a. A Catalogue of the Recent Sea-Urchins (Echinoidea) in the Collection of the British Museum (Natural History). 250 pages, 12 plates. London: Trustees of the British Museum.
- 1925b. A New Clypeaster from Angola. Annals of the South African Museum, 20(5):317-318, plate 33.
- 1925c. Echinoderms from the South African Fisheries and Marine Biological Survey, Part I: Sea-Urchins (Echinoidea). Fisheries and Marine Biological Survey Report, 4:1-16, plates 1-4.
- 1925d. Echinoderms of Tropical Pacific. Echinoderms Other than Sea-Stars. Bernice P. Bishop Bulletin, 27:89-112, plates 9-11.
- 1926. Notes on a Collection of Echinoderms from the Australian Museum. Records of the Australian Museum, 15(2):183-192, figure 1.
- 1928. The Sca-Lilies, Sea-Stars, Brittle-Stars, and Sea-Urchins of the South Australian Museum. Records of the South Australian Museum, 3(4):361–482, figures 108–142.
- 1929. A New Miocene Echinoid from California. Transactions of the San Diego Society of Natural History, 5(17):257-262, plate 31.
- 1932. Echinoderma (Other than Asteroidea). Great Barrier Reef Expedition, 1928-29, Scientific Reports, 4(7): 197-239, figures 1-9, plate 1.
- 1935. Some New Echinoderms from California. The Annals and Magazine of Natural History, (10)15(85):120-129.
- 1937a. A New Eocene Sea-Urchin from Alabama. Journal of Paleontology, 11(3):248-249, figures 1-3.
- 1937b. A New Sea-Urchin from the "Oligocene" of Oregon. Transactions of the San Diego Society of Natural History, 8(28):367-374, plate 24.

- 1938. Echinoderms from Australia: An Account of Collections Made in 1929 and 1932. Memoirs Museum of Comparative Zoology at Harvard College, 55:1-596, figures 1-64, plates 1-28.
- 1939. A Remarkable New Genus of Sea Urchin (Spatangidae). Allan Hancock Pacific Expeditions, 2(11):173-176, plate 17.
- 1940a. A Revision of the Keyhole Urchins (Mellita). Proceedings of the United States National Museum, 3099, 89:435-444, plates 60-62.
- 1940b. East Pacific Expeditions of the New York Zoological Society, XXI: Notes on Echinoderms from the West Coast of Central America. Zoologica, 25(3):331-352, figures 1-4, plates 1-4. (Scientific Contributions of the New York Zoological Society, 22.)
- 1941. Reports on the Scientific Results of the Atlantis Expeditions to the West Indies under the Joint Auspices of the University of Havana and Harvard University: The Echinoderms (Other Than Holothurians). Memorias de la Sociedad Cubana de Historia Natural, 15(1):1-154, plates 1-10.
- 1945. Echinoidea. Pages 312-328 in Geology of Lau, Fiji, by Harry S. Ladd and J. Edward Hoffmeister. Bernice P. Bishop Museum Bulletin, 181, plates 41-43.
- 1947. A New and Remarkable Keyhole Urchin, Mellita notabilis 11. sp. Bulletin of the Southern California Academy of Science, 46(2):77-78.
- 1948. A Report on the Echini of the Warmer Eastern Pacific, Based on the Collections of the Velero III.

 Allan Hancock Pacific Expeditions, 8(5):225-352, figures 1-3, plates 35-71.

Clegg, E. L. G.

1933. Echinoidea from the Persian Gulf. *Palaeontologia*Indica, new series, 22(1):1-35, figures 1-2, plates
1-3. (Memoirs of the Geological Survey of India.)

Collignon, M.

- 1930. Beitrag zur Kenntnis der eozänen Echiniden-fauna des Krappfeldes (Kärnten). Jahrbuch der Geologischen Bundesanstalt, 80(3-4):541-570, plates 31-33.
- 1949. Tessieria, nouveau genre d'Échinides du Maëstrichtien du Sénégal (Tessieria senegalensis, sp. nov.). Bulletin de la Société Géologique de France, (5)19 (1-3):263-268, figures 1-2, plate 9a.
- 1950. Recherches sur les faunes albiennes de Madagascar, II: Les Échinides d'Ambarimaninga. Annales géologiques du Service des Mines, 17:6-16, figure 1, plates 1-2.

Comaschi Caria, I.

1955. Il Sottogenere Amphiope in Sardegna. Bollettino della Società Geologica Italiana, 74(1):183-194, plates 1-15.

Cooke, C. W.

- 1941a. Cenozoic Regular Echinoids of Eastern United States. Journal of Paleontology, 15(1):1-20, plates 1-4.
- 1941b. Oligopygus nancei, a New Echinoid from Venezuela. Journal of Paleontology, 15(3):305-306, figures 1-3.
- 1942. Cenozoic Irregular Echinoids of Eastern United States. Journal of Paleontology, 16(1):1-62, plates 1-8.

- 1946. Comanche Echinoids. Journal of Paleontology, 20 (3):193-237, plates 31-34.
- 1947. A New Jurassic Stomechinus from the Big Horn Basin, Wyoming. Journal of Paleontology, 21(5):473-475, figure 1-6.
- 1948. Arbia and Dixieus, Two New Genera of Echinoids. Journal of Paleontology, 22(5):606-607.
- 1949a. Pygurostoma pasionensis, a Cretaceous Echinoid from Guatemala. American Museum Novitates, 1422:1-3, figure 1.
- 1949b. Two Cretaceous Echinoids from Peru. Journal of Paleontology, 23(1):84-86, plate 22.
- 1953. American Upper Cretaceous Echinoidea. United States Geological Survey Professional Paper, 254-A: 1-44, plates 1-16.
- 1954. Pliocene Echinoids from Okinawa. United States Geological Survey Professional Paper, 264-C:45-53, plates 9-12.
- 1955. Some Cretaceous Echinoids from the Americas.

 United States Geological Survey Professional Paper,
 264-E:87-112, figure 4, plates 18-29.
- 1957. Geology of Saipan, Mariana Islands, Part 3: Paleontology, Chapter J., Echinoids. *United States Geological Survey Professional Paper*, 280-J:361-364, plate 119.
- 1958. Cretaceous Echinoidea of New Jersey and Adjacent Regions. In The Cretaceous Fossils of New Jersey. Bulletin of the New Jersey Geological Survey, Division of Geology, 61(1):45-54, plates 6-8, 46.
- 1959. Cenozoic Echinoids of Eastern United States. United States Geological Survey Professional Paper, 321:1-106, plates 1-43.
- 1961. Cenozoic and Cretaceous Echinoids from Trinidad and Venezuela. Smithsonian Miscellaneous Collections, 142(4):1-35, plates 1-14.

Cooper, G. A.

- 1931a. Lepidechinoides Olsson, a Genus of Devonian Echinoids. Journal of Paleontology, 5(2):127-142, figures 1-2, plates 18-19.
- 1931b. A New Species of the Genus Lepidesthes. American Journal of Science, (5)22(132):531-538, figures 1-2.

Corroy, G.

1925. Le néocomien de la bordure orientale du bassin de Paris. Bulletin de la Société des Sciences de Nancy, (4)2(4):171-504, figures 1-33, plates 1-11.

Cotton, B. C., and F. K. Godfrey

1942. Echinodermata of the Flindersian Region Southern Australia. Records of the South Australian Museum, 7(2):193-234, plate 12.

Cottreau, J.

- 1922. Paléontologie de Madagascar, X: Fossiles crétacés de la côte orientale. *Annales de Paléontologie*, 11(3/4): 109-192, plates 1-11.
- 1933. Échinides du Miocène en Anjou. Bulletin de la Société Géologique de France, (5)3(7-8):541-553, plates 26-27.
- 1935. Quelques échinides fossiles de Madagascar. Archives du Muséum, (6)12:259-264, plate 1.

Crespin, I.

1944. The Occurrence of the Genus Conoclypus in the

North-West Division, Western Australia. Journal of the Royal Society of Western Australia, 28:75-77, plate 1.

Čtyroký, P.

1965. Lovenia mortenseni n. sp., a New Species of Spatangoid Echinoid from the Miocene of the Vienna Basin. Sbornik Geologických Věd, 5:107-121, figures 1-6, plates 1-6.

Currie, E. D.

- 1924. On Fossil Echinoidea from the Aru Islands. Geological Magazine, 61:63-72, plate 4.
- 1925. Jurassic and Eocene Echinoidea. (Somaliland.) Monographs of the Geological Department of the Hunterian Museum, Glasgow University, 1:46-78, figures 1-14, plates 8-10.
- 1927. Jurassic and Eocene Echinoidea from Somaliland.

 Transactions of the Royal Society of Edinburgh,

 55(2):411-441, figures 1-7b, 1 plate.
- 1930. The Echinoidea in the McKinnon Wood Collection.

 Monographs of the Geological Department of the
 Hunterian Museum, Glasgow University, 4(9):169179, plate 16.
- 1935a. 1V, Jurassic Echinoidea. Pages 40-46 in The Mesozoic Paleontology of British Somaliland, Part 2 of Geology and Palaeontology of British Somaliland. Figure 1, plate 6. Glasgow University.
- 1935b. Report on Miocene Echinoids from Cyprus Collected by Dr. F. R. C. Reed. *The Annals and Magazine of Natural History*, (10)15(85):31-37, plates 3-4.
- 1938. Neogene Echinoidea in the Second McKinnon Wood Collection. Monographs of the Geological Department of the Hunterian Museum, Glasgow University, 5(5):82-89, plates 8-9.
- 1939. Note on Echinoidea from Burma. Records of the Geological Survey of India, 74(2):216-228, figures 1-5, plate 14.
- 1943. Palaeontology of Harrar Province, Ethiopia, Part 2: Echinoidea. Bulletin of the American Museum of Natural History, 82(2):14-29, figures 1-11, plates 3-4.
- Dacqué, E.
 1939. Die Fauna der Regensburg-Kelheimer Oberkreide.

 Abhandlungen der Bayerischen Akademie der Wissenschaften (new series), 45:1-218, plates 117.

Dartevelle, E.

1953. Échinides fossiles du Congo et de l'Angola, 2e partie: Description systématique des Échinides fossiles du Congo et de l'Angola. Annales du Musée Royal du Congo Belge, (8)13:1-240, figures 1-56, plates A-C, 1-19.

Das Gupta, H. C.

1929. A Short Note on the Cretaceous Fauna of the Khasi Hills, Assam. The Quarterly Journal of the Geological, Mining, and Metallurgical Society of India, (2)1:25-34, plates 1-2.

Da Viega Ferreira, O.

1962. Nota sobre a presença do género "Agassizia" no Miocénico do Algarve. Communiçaões dos Serviços Geológicos de Portugal, 46:293-295, plate 1.

Davies, L. M.

1926. Remarks on the Known Indian Species of Conocly-

peus, with Descriptions of Two New Species from the Eocene of North-West India. Records of the Geological Survey of India, 59(3):358-368, plates 25-26.

1943. Tertiary Echinoidea of the Kohat-Potwar Basin.

Quarterly Journal of the Geological Society of London, 99:63-79, 1 figure, plates 11-13.

Davies, L. M., and E. S. Pinfold

1937. The Eocene Beds of the Punjab Salt Range. Palaeontologica Indica (new series), 24(1):1-79, figures 1-4, plates 1-7.

De Gregorio, A.

1930a. Sul Permiano di Sicilia. Annales de Géologie et de Paléontologie, 52:1-70, plates 1-21.

1930b. Fossili triassici delle Cave di Billiemi presso Palermo. Annales de Géologie et de Paléontologie, 54:1-40, plates 1-7.

Dehée, R.

1927. La faune marine du terrain houiller inferieur de Merville. Annales de la Société Géologique du Nord, 52:286-295, plate 7.

Dehm, R.

1953. Rhenechinus hopstätteri nov. gen. nov. sp., ein seeigel aus dem rheinischen Unter-Devon. Notizblatt des Hessischen Landesamtes für Bodenforschung zu Wiesbaden, 81(4):88-95, figures 1-2, plate 5.

1961. Ein zweiter Seeigel, Porechinus porosus nov. gen. nov. spec., aus dem rheinischen Unter-Devon. Mitteilungen der Bayerische Staatssammlung für Paläontologie und historische Geologie, 1:1-8, figures 1-3, plate 1.

Deleau, P.

1938. Étude géologique des régions de Jemmapes, Hammam Meskoutine et du Col des Oliviers. Bulletin du Service de la Carte Géologique de l'Algérie, (2) 14:1-383, plates 1-6.

Demanet, F.

1931. Lovenechinus jacksoni, nov. sp., Palechinide nouveau du Dinantien Inférieur. Bulletin du Musée Royal d'Histoire Naturelle de Belgique, 7(8):1-9, figures 1-7.

Démoly, M.

1928. Note de M. Jules Lambert sur des échinides de la Savoie et de l'Isère. Bulletin de la Société d'Histoire Naturelle de Savoie, (2)21:139-153, plate 1.

Denizot, G.

1935. Monographies géologiques des environs de Marseille: Description des massifs de Marseilleveyre et de Puget. Annales du Musée d'Histoire Naturelle de Marseille, 26(5):5-236, figures 1-43, plates 1-5.

Deraniyagala, P.E.P.

1956. Some Fossils from the Miocene Amphitheatre at Minihagalkanda, Ceylon. Spolia Zeylanica, Bulletin of the National Museums of Ceylon, 28(1):1-5, plates 1-3.

1961. The Amphitheatres of Minihagel Kanda, Their Possible Origin and Some of the Fossils and Stone Artefacts Collected from Them. Spolia Zeylanica, Bulletin of the National Museums of Ceylon, 29(2): 149-161, figures 1-4, plates 1-8.

De Saez, M. D.

1930. Un nuevo equinodermo fosil argentino. Revista del Museo de la Plata, Universidad Nacional de la Plata (Buenos Aires), 32:57-60, 2 figures.

Desio, A.

1929. Resultati scientifici della missione alla Oasi di Giarabùb. (1926-1927). Reale Società Geografica Italiana, 4(3):293-350, figures 27-44, plates 32-40.

1934. Faune neogeniche della Sirtica (Cirenaica). Reale Accademia d'Italia, 3:185-228, figures 7-11, plates 15-22.

Devanesen, D. W.

1930. Note on a New Sea-Urchin of the Genus Chaetodiadema (Abstract). Proceedings of the Seventeenth Indian Science Congress, Section 4, Zoology:249.

Devriès, A.

1956a. Sur une nouvelle espèce d'échinide en Algérie: Enallaster transiens Pomel (in coll.). Publications du Service de la Carte Géologique de l'Algérie (new series), 8:251-267, figure 1, plates 1-3.

1956b. Note sur une faune échinitique fossile recueillie dans le Sud-Oranais. *Publications du Service de la Carte Géologique de l'Algérie* (new series), 8:267-290, plates 1-2.

1960. Contribution à l'étude de quelques groupes d'Échinides fossiles d'Algérie. Publications du Service de la Carte Géologique de l'Algérie, Paléontologie (new series), 3:1-279, tables 1-31, plates 1-39.

1967. Études sur des Échinides fossiles de Turquie. Travaux de l'Institut de Géologie et d'Anthropologie Préhistorique de la Faculté des Sciences de Poitiers, 8:163-200, figures 1-3, plates 1-6.

Devriès, A., and G. Alcaydé

1966. Note sur une nouvelle espèce de la famille des Galéropygidés, suivie de quelques considérations stratigraphiques sur le gisement qui l'a fournie. Travaux de l'Institut de Géologie et d'Anthropologie Préhistorique de la Faculté des Sciences de Poitiers, 7:19-30, plates 1-2.

Djabarov, G. N.

1968. A New Upper Cretaceous Echinocorys from Central Asia. In B. P. Markovsky, editor, New Species of Prehistoric Plants and Invertebrates of the U.S.S.R. Vsesoiuznyi nauchno-issledovatel'skii geologicheskii institut, ministerstvo geologii i okhrany nedr SSR, 2(2):288-289, plate 67, figure 39.

Djakonov, A. M.

1938. The Echinodermata of Siaukhu Bay (Japan Sea).

Reports of the Japan Sea Hydrobiological Expedition
of the Zoological Institute, Academy of Sciences of
the U.S.S.R. in 1934, 1:425-498, figures 1-10.

Dollfus, R. P.

1946. Sur un *Pseudechinus* récolté par Charles Vélain a l'Île Saint-Paul: Observations morphologiques et biogéographiques. *Mémoires du Muséum National d'Histoire Naturelle* (new series), 22(4):159–178, figures 1–16, plates 3–4.

Douglas, J. A.

1928. Contributions to Persian Palaeontology. Contributions to Persian Palaeontology, 3:1-19, plates 8-15.

Durham, J. W.

1949. Dendraster elsmerensis Durham, n. sp. American Journal of Science, 247:49-62, figures 1-2, plates 1-2.

1950. 1940 E. W. Scripps Cruise to the Gulf of California, Part 2: Megascopic Paleontology and Marine Stratigraphy. The Geological Society of America Memoir, 43:1-216, plates 1-48.

1952. Not Astrodapsis in Japan. Journal of Paleontology, 26(5):844-846, figure 1.

1953a. Type-Species of Scutella. Journal of Paleontology, 27(3):347-352, figure 1, plate 47.

1953b. New Name for Nipponaster Durham, 1952. Journal of Paleontology, 27(5):756.

1954. A New Family of Clypeastroid Echinoids. Journal of Paleontology, 28(5):677-684, figures 1-3.

1955. Classification of Clypeastroid Echinoids. University of California Publications in Geological Sciences, 31(4):73-198, figures 1-38, plates 3-4.

1957. Notes on Echinoids. Journal of Paleontology, 31(3):625-631, figures 1-2, plate 72.

1961a. Miocene Echinoids from the Valle Central, Costa Rica. *Journal of Paleontology*, 35(3):480–488, figures 1–2, plates 67–68.

1961b. The Echinoid Mellita in the Pacific Coast Cenozoic. Contributions in Science, Los Angeles County Museum, 48:1-12, figure 1, plates 1-2.

1966. Evolution among the Echinoidea. Biological Reviews of the Cambridge Philosophical Society, 41(3):368-391, figures 1-6.

Durham, J. W., and R. V. Melville

1957. A Classification of Echinoids. Journal of Paleontology, 31(1):242-272, figures 1-9.

Durham, J. W., H. B. Fell, A. G. Fischer, P. M. Kier, and C. D. Wagner and J. W. Durham, et al.

1966. Treatise on Inv2rtebrate Paleontology, Part U: Echinodermata 3. Volumes 1 and 2, 695 pages, 534 figures. Geological Society of America, Inc. and the University of Kansas Press.

Dzhalilov, M. P., and E. V. Egorov

1969. Late-Senonian Sea Urchins and Some New Data on Stratigraphy of the Upper Senonian in the South-Western Spurs of the Gissar Ridge. *Izvestiia Akademiia Nauk Tadzhikskoi SSR Dushanbe*, 4(34):105–114, figures 1a-e, 2a-c, 3a-e.

Eaton, J. E., U. S. Grant, and H. B. Allen

1941. Miocene of Caliente Range and Environs, California.

Bulletin of the American Association of Petroleum

Geologists, 25(2):193-262, figures 1-14, plates 1-9.

El-Din Mahmoud, I. G.

1955. Études paléontologiques sur la faune Crétacique du Massif du Moghara (Sinaï-Egypte). Publications de l'Institut du Desert d'Egytpe, 8:1-195, figures 4-81, plates 1-19.

Elouard, P., and J. Roman

1966. Présence du genre Gagaria (Échinide régulier Temnopleuridé) dans l'Éocène moyen de la vallée du Sénégal. Bulletin de la Société Géologique de France, (7)8(6):839-844, figures 1-2, plate 19.

Endean, R.

1964. A New Species of Venomous Echinoid from Queens-

land Waters. Memoirs of the Queensland Museum, 14(4):95-100, figure 1, plate 12.

Engel, H.

1961. Some Fossil Clypeastrids (Echinoidea) from Brimstone Hill (St. Kitts) and Sugar Loaf (St. Eustatius), Lesser Antilles. *Beaufortia*, 9(94):1-6, figures 1-4.

1964a. On Two New Species of *Holectypus* Desor from the Senonian of South-Limburg near Maastricht, Netherlands. *Zoologische Mededelingen*, 39:235–239, figures 1–2, plate 14.

1964b. On Winkleria maastrichtensis nov. gen. et nov. spec. (Echinoidea, Regularia, Stirodonta, Phymosomina ?Phymosomatidae) from the Upper-Cretaceous (Md) of Maastricht (Limburg, Netherlands). Beaufortia, 10(126):207-211, figures 1-4, plate 1.

Ernst, G.

1970. Faziesbundenheit und Ökomorphologie bei irregulären Echiniden der nordwestdeutschen Oberkreide. Paläontologische Zeitschrift, 44(1/2):41-62, figures 1-8, plate 5.

Faas, A. V.

1941. Atlas of the Leading Forms of the Fossil Fauna of the U.S.S.R., Lower Carboniferous (Echinoidea).

Pages 72-75 in volume 4 in L. Librovitch, The Atlas of the Guide Forms of the Fossil Faunas of the U.S.S.R. Figures 6-9, plate 10. Leningrad.

Fabre, A.

1933. Note sur les Amphiopes de l'Helvétien du Gers. Extraits des Procès-Verbaux des Séances de la Société Linnéenne de Bordeaux, 85:33-36.

Fell, H. B.

1947. A Giant Heart-Urchin, Brissus gigas, n. sp., from New Zealand. Records of the Auckland Institute and Museum, 3(3):145-150, figures 1-2, plates 13-14.

1949. An Echinoid from the Tertiary (Janjukian) of South Australia, Brochopleurus australiae sp. nov. Memoirs of the National Museum of Victoria, 16:17-19, plate 1.

1950. A Triassic Echinoid from New Zealand. Transactions of the Royal Society of New Zealand, 78(1): 83-85, figure 3, plate 12.

1954. Tertiary and Recent Echinoidea of New Zealand: Cidaridae. New Zealand Geological Survey Paleontological Bulletin, 23:1-62, figures 1-15, plates 1-15.

1958. Deep-Sea Echinoderms of New Zealand. Zoology Publications from Victoria University of Wellington, 24:1-40, plates 1-5.

1962. A New Cretaceous Echinoid from the Franciscan Formation of California. Transactions of the Royal Society of New Zealand (Zoology), 2(2):27-30, plate 1.

1963a. New Genera of Tertiary Echinoids from Victoria, Australia. Memoirs of the National Museum of Victoria, 26:211-217, plates 1-2.

1963b. The Spatangid Echinoids of New Zealand. Zoology Publications from Victoria University of Wellington, 32:1-8, figure 1, plates 1-6.

Fischer, A. G.

1951. The Echinoid Fauna of the Inglis Member, Moodys Branch Formation. Florida Geological Survey, Geological Bulletin, 34(2):49-101, figures 1-18, plates 1-7.

Flandrin, J.

1929. Contribution à l'étude des terrains crétacés de l'Anatolie du Nord (Asie Mineure), III: Paléontologie. Annales de l'Université de Grenoble, Section Science-Médicine (new series), 6(3):342-375.

Frenguelli, J.

1944. Stomechinus pulchellus n. sp. nuevo equinodermo del Titoniense del Neuquén. Notas del Museo de la Plata, Paleontologia, 9(61):1-11, plate 1.

Gardner, J.

1933. The Midway Group of Texas. The University of Texas Bulletin, 3301:1-403, figures 1-4, plates 1-28.

Gill, W. D.

1953. Facies and Fauna in the Bhadrar Beds of the Punjab Salt Range, Pakistan. Journal of Paleontology, 27(6):824-844, figures 1-3, plates 88-91.

Gočev, P.

- 1928. Revision und Ergänzung der alttertiären Fauna von Haskovo, I: Echinoidea. Zeitschrift der Bulgarischen Geologischen Gesellschaft, 1(2):37-50, figures 1-4, plate 1.
- 1933. Paleontologische und stratigraphische Untersuchungen über das Eocän von Varna. Zeitschrift der Bulgarischen Geologischen Gesellschaft, 5:1-82, figures 1-14, plates 1-7.

Gonçalves, F., and J. Roman

1963. Une sous-espèce nouvelle de Rotula orbiculus Linné dans les formations Plio-Quaternaires de l'Angola.

Boletim do Museu e Laboratório Mineralógico e Geológico da Faculdade de Ciências (University of Lisbon) 9(2):99-106, plates 1-5.

Gordon, W. A.

1963. Middle Tertiary Echinoids of Puerto Rico. Journal of Paleontology, 37(3):628-642, figures 1-4, plates 79-81.

Gorodiski, A.

1951. Au sujet de quelques Cassiduloida (oursins irréguliers) de l'Éocène Moyen du Sénégal. Bulletin du Muséum National d'Histoire Naturelle, (2)23(3):322-330, figures 1-2, plate 1.

Grant, U. S., and L. G. Hertlein

- 1938a. Brissopsis blanpiedi, a New Species of Echinoid from the Medial Tertiary of Mississippi. The American Midland Naturalist, 19(2):482-486, figures 1-10.
- 1938b. The West American Cenozoic Echinoidea. Publications of the University of California at Los Angeles in Mathematical and Physical Sciences, 2:1-225, figures 1-17, plates 1-30.
- 1956. Schizaster morlini, a New Species of Echinoid from the Pliocene of Imperial County, California. Bulletin of the Southern California Academy of Sciences, 55(2):107-109, plate 29.

Gregorio, A. de - See De Gregorio, A.

Gupta, H. C. das - See Das Gupta, H. C.

Hall, Jr., C. A.

1966. Archaeopneustes moorefieldi, a New Pliocene Spatangoid Echinoid from the San Luis Obispo Area, California. Journal of Paleontology, 40(5):1123-1126, plate 145.

Hassan, M. Y.

1969. Contributions to the Echinoid Fauna of the Maestrichtian-Paleocene Strata of South Western Egypt. Proceedings of the Egyptian Academy of Science, 22:15-19, 1 plate, 3 tables.

Haughton, S. H.

- 1924. Notes sur quelques fossiles crétacés de l'Angola (Cephalopodes et Échinides). Comunicações dos Serviços Geológicos de Portugal, 15:79-106, plates 1-4.
- 1925. Notes on Some Cretaceous Fossils from Angola (Cephalopoda and Echinoidea). Annales of the South African Museum, 22:263-288, plates 12-15.

Hawkins, H. L.

- 1924. Notes on a New Collection of Fossil Echinoidea from Jamaica. Geological Magazine, 61(721):312-324, plate 18.
- 1926. On a New Species of Phyllobrissus from a Deep Boring at Virginia Water, Surrey. Summary of Progress of the Geological Survey of Great Britain and the Museum of Practical Geology for the Year 1925, Appendix 7:189-191, figure 23.

1935a. V, Cretaceous Echinoidea. Pages 47-56 in the Mesozoic Palaeontology of British Somaliland, part 2 of Geology and Paleontology of British Somaliland. Figures 1-14, plates 6-7.

1935b. Two Genera of Carboniferous Echinoidea (Lepidocidaris and Hyattechinus) New to Britain. Quarterly Journal of the Geological Society of London, 91:239-250, 3 figures, plates 14-15.

1946. Cravenechinus, a New Type of Echinoid from the Carboniferous Limestone. Geological Magazine, 83(4):192-197, 1 figure, plate 13.

Hayasaka, I.

1948. Notes on Some Fossil Echinoids of Taiwan, IV. Acta Geologica Taiwanica, 2(2):85-124, plates 1-5.

Hayasaka, I., and A. Morishita

1947. Notes on Some Fossil Echinoids of Taiwan, II and III. Acta Geologica Taiwanica, 1(2):93-113, plates 8-9; 111-128, plates 10-16.

Hayasaka, I., and P. Morishita

1947. Fossil Species of Clypeaster from Taiwan (with Appendix: A Fossil Clypeaster from Tokuno-shima, Kagoshima Prefecture, Japan). Acta Geologica Taiwanica, 1(1):39-52, plates 1-5.

Hayasaka, I., and M. Shibata

1952. A New Tertiary Species of Echinarachnius from Hokkaido. Journal Faculty of the Science, Hokkaido University, (4)8(2):82-85, figure 1.

Henderson, R. A., and H. B. Fell

1969. Taimanawa, a New Genus of Brissid Echinoids from the Tertiary and Recent Indo-West-Pacific with a Review of the Related Genera Brissopatagus and Gillechinus. Breviora, 320:1-29, figures 1-3, plates 1-5.

Hertlein, L. G., and U. S. Grant

1960. The Geology and Paleontology of the Marine Pliocene of San Diego, California. *Memoirs of the San Diego Society of Natural History*, 2(2a):71-133, plates 19-26.

Holland, Jr., F. D., and R. M. Feldmann

1967. A New Species of Cassiduloid Echinoid from the Fox Hills Formation (Upper Cretaceous) of North Dakota. *Journal of Paleontology*, 41(1):252-255, figure 1.

Ikeda, H.

- 1935a. A New Clypeaster from Japan. Annotationes Zoologicae Japonenses, 15(1):103-104, plate 7.
- 1935b. Preliminary Report on a New Cidarid Sea-Urchin from the Western Pacific. *Proceedings of the Imperial Academy*, 11(9):386-388, figure 1.
- 1936a. Note on a New Echinarachnius from Japan. Botany and Zoology Theoretical and Applied, 4(7):1231-1233, figures 1-2.
- 1936b. Preliminary Note on a New Family of the Cidaroidea. Annotationes Zoologicae Japonenses, 15(4): 486-489, plates 33-34.
- 1939a. A New Genus and New Species of the Cidaridae from the Bonin Islands (Cidaroida). Records of Oceanographic Works in Japan, 10(2):160-164, plates 7-10.
- 1939b. A New Species of Diadema from Japan. Records of Oceanographic Works in Japan, 10(2):165-167, plate
- 1940. Coptopleura sema, a New Genus and New Species of the Temnopleurid from the Ogasawara Islands (Echinoidea). Annotationes Zoologicae Japonenses, 19(2):92-96, plate 6.
- 1941. Preliminary Report on Chorocidaris micca gen. et sp. nov., from the Ryükyü Islands (Echinoidea, Cidaridae). Annotationes Zoologicae Japonenses, 20(2):85-87, plate 6.

Ikins, W. C.

1940. Some Echinoids from the Cretaceous of Texas. Bulletins of American Paleontology, 25(90):53-79, plates 4-6.

Imbesi Smedile, M.

1958. Clipeastri Aquitaniani, Elveziani e Tortoniani della Calabria. *Palaeontographia Italica*, 53:1–47, figures 1–2, plates 1–22.

Innocenti, G.

1924. Due nuovi echinidi dell'Eocene Istriano. Rivista Italiana di Paleontologia, 30:41-44, plate 2.

Israelsky, M. C.

- 1924. Notes on Some Echinoids from the San Rafael and Tuxpam Beds of the Tampico Region, Mexico.

 Proceedings of the California Academy of Sciences, (4)13(8):137-145, plates 2-4.
- 1933a. A New Species of Echinoid from Tamaulipas, Mexico. Transactions of the San Diego Society of Natural History, 7(22):275-276, plate 18.
- 1933b. Echinoids from the Malumbang Formation, Philippine Islands. *The Philippine Journal of Science*, 50(3):301-307, plates 1-5.

Jackson, R. T.

1926. Lepidesthes howsei sp. nov. a Carboniferous Echinoid from Northumberland. Geological Magazine, 63(750):529-533, plate 30.

- 1929. Palaeozoic Echini of Belgium. Mémoires du Musée Royal d'Histoire Naturelle de Belgique, 38:1-96, figures 1-10, plates 1-10.
- 1937. Mexican Fossil Echini. Proceedings of the United States National Museum, 84(3015):227-237, plates 12-15.

Jeannet, A.

- 1927. Un Paracidaris nouveau du Jura argovien. Eclogae Geologicae Helvetiae, 20(3):393-396, plate 12.
- 1928a. Contribution à l'Étude des Échinides tertiaires de la Trinité et du Venezuela. Abhandlungen der Schweizerischen Palaeontologischen Gesellschaft, 48(1):1-49, figures 1-12, plates 1-6.
- 1928b. Sur les échinides tertiaires du Venezuela et de la Trinité conservés au Musée d'Histoire Naturelle de Bâle. Verhandlungen Schweizerische Naturforschende Gesellschaft, 109:220-221.
- 1928c. Sur quelques échinides jurassiques de la collection Renz. Verhandlungen Schweizerische Naturforschende Gesellschaft, 109:221.
- 1928d. Sur quelques échinides jurassiques de la Collection Renz. Eclogae Geologicae Helvetiae, 21(2):460-465, plate 36.
- 1929. Revision des Rhabdocidaris du Jurassique supérieur Suisse. Abhandlungen der Schweizerischen Palaeontologischen Gesellschaft, 48(3):1-45, figures 1-17, plates 1-5.
- 1931. (Neuchâtel): Sur quelques Leiocidaris jurassiques. (Note préliminaire). Eclogae Geologicae Helvetiae, 24(2): 1 page.
- 1933a. Note sur un Miocidaris nouveau. Abhandlungen der Schweizerischen Palaeontologischen Gesellschaft, 53: 1-7, figures 1-2, plate 30.
- 1933b. Sur quelques Échinides néocomiens du Vorarlberg. Verhandlungen der Schweizerische Naturforschende Gesellschaft, 114:370-371.
- 1933c. Sur quelques Échinides néocomiens du Vorarlberg. Eclogae Geologicae Helvetiae, 26(2):233-234.
- 1933d. Sur quelques *Leiocidaris* jurassiques suisses. *Mémoires de la Société Paléontologique Suisse*, 53: 1-7, 3 figures, plate 1.
- 1934a. Présence du genre Schizobrissus dans le Nummulitique d'Iberg (S. damiani n. sp.). Eclogae Geologicae Helvetiae, 27(2):388-389.
- 1934b. Présence du genre Schizobrissus dans le Nummulitique d'Iberg (S. damiani sp. n.). Verhandlungen der Schweizerischen Naturforschenden Gesellschaft, 115: 334-335.
- 1934c. Sur quelques Échinides crétacés d'Ibiza (Baléares). Eclogae Geologicae Helvetiae, 27(2):387-388.
- 1934d. Sur quelques Échinides néocomiens du Vorarlberg. Abhandlungen der Schweizerischen Palaeontologischen Gesellschaft, 64(4):1-7, plate 1. [This is Zoological Record pagination but reference on reprint is Mémoires de la Société Paléontologique Suisse, 54:1-7, 2 figures, 1 plate. Weisbord gives still another reference; he gives another paper of same title for 1933.]

- 1935a. Sur deux Échinides irréguliers du Crétacé inférieur d'Ibiza (Baléares). Proceedings of the Section of Sciences, Koninklijke Akademie van Wetenschappen te Amsterdam, 38(1-5):181-185, figures 1-3, 1 plate.
- 1935b. Observations sur des Échinides sculptés de la Gironde. Eclogae Geologicae Helvetiae, 28:559-560. [Species described as new in Jeannet's "Description de quelques Échinides sculptés du Lutétian supérieur, etc." in 1936. Not listed in Zoological Record in 1936 as a new species.]
- 1936a. Description de quelques Échinides sculptés du Lutétian supérieur des environs de Bordeaux. Mémoires de la Société Paléontologique Suisse, 57: 1-13, figures 1-16, plates 1-2.
- 1936b. Sur un Diplocidaris marocain: Diplocidaris mauritanicus nov. sp. Eclogae Geologicae Helvetiae, 29(2):607-611, figures 1-2, plate 37.
- 1936c. Sur quelques grands Échinides irréguliers du Nummulitique des environs d'Iberg (Schwyz). Berichte Schweizerische Naturforschende Gesellschaft, 1:52-70, figures 1-15, plate 3.
- 1952. Sur deux Échinides tertiaires de la Nouvelle-Calédonie. Bulletin de la Société Géologique de France, (6)1(7):413-418, plate 12.
- 1953. Hessotiara zuberi sp. nov. Échinide nouveau du Jura soleurois. Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich, 98(3):176-177, plate 1.
- 1955. Sur quelques Échinides fossiles étrangers. Bulletin de la Société Géologique de France, (6)5(7-9):553-561, figure 1, plates 25-26.
- 1959. Sur quelques Échinides tertiaires de la Trinité. Verhandlungen der Schweizerische Naturforschende Gesellschaft, 70(2):193-204, plates 1-9.

Jeannet, A., and R. Martin

1937. Üeber Neozoische Echinoidea aus dem Niederlandisch-Indischen Archipel. Leidsche Geologische Mededeelingen, (6)8(2):215-308, figures 1-67.

Jekelius, E.

1932. Der weisse Triaskalk von Braşov und seine Fauna.

Anuarul Institutului Geologic al României, 17:1-107,
plates 1-9.

Jesionek-Szymańska, W.

- 1963. Échinides irréguliers du Dogger de Pologne. Acta Palaeontologica Polonica, 8(3):293-414, text-plates 1-14, plates 1-7.
- 1970. On a New Pygasterid (Echinoidea) from the Jurassic (Middle Lias) of Nevada, U.S.A. Acta Palaeontologica Polonica, 15(4):411-419, figure 1, plates 1-2.

Jones, S. T.

1938. Geology of Sierra de la Peña and Paleontology of the Indidura Formation, Coahuila, Mexico. Bulletin of the Geological Society of America, 49(1):69-150, figures 1-4, plates 1-13.

Jordan, E. K., and L. G. Hertlein

1926. Expedition to the Revillagigedo Islands, Mexico, in 1925, VII: Contribution to the Geology and Paleontology of the Tertiary of Cedros Island and Adjacent Parts of Lower California. Proceedings of the California Academy of Sciences, (4)15(14):409-464, plates 27-34.

- Keller, A., and H. Vautrin
 - 1937. Nouvelle contribution à l'étude des échinides de la Syrie et du Liban. Notes et Mémoires, Haut-Commissariat de la République Française en Syrie et au Liban, 2(2):137-164, figures 44-49, plates 5-7.

Kellum, L. B.

- 1926. Paleontology and Stratigraphy of the Castle Hayne and Trent Marls in North Carolina. *United States Geological Survey Professional Paper*, 143:1-56, figure 1, plates 1-11.
- 1931. Revision of the Names of Three Fossils from the Castle Hayne and Trent Marls in North Carolina. Journal of the Washington Academy of Sciences, 21(4):51-52.

Khanna, S. N.

1967. A New Species of Genus Eupatagus from Eocenes of Jaisalmer, Rajasthan (India). Proceedings of the National Academy of Sciences, India, 37B(2):214-220, figure 1, plate 1.

Kier, P. M.

- 1953. A New Lower Carboniferous Echinoid from North America. Geological Magazine, 90(1):65-69, figures 1-4.
- 1954. A New Palaeechinus from Alberta. Geological Magazine, 91(3):252-254, figures 1-2.
- 1956. A New Genus of Echinoid from the Palaeozoic of Ireland. Geological Magazine, 93(1):15-17, figures 1-2, plate 1.
- 1957a. A New Upper Carboniferous Echinoid from Texas. Geological Magazine, 94(4):326-328, figure 1.
- 1957b. Tertiary Echinoidea from British Somaliland. *Journal of Paleontology*, 31(5):839–902, figures 1–20, plates 103–107.
- 1958a. New American Paleozoic Echinoids. Smithsonian Miscellaneous Collections, 135(9):1-26, figures 1-22, plates 1-8.
- 1958b. Permian Echinoids from West Texas. Journal of Paleontology, 32(5):889-892, figures 1-3, plate 114.
- 1962. Revision of the Cassiduloid Echinoids. Smithsonian Miscellaneous Collections, 144(3):1-262, figures 1-184, plates 1-44.
- 1963. Tertiary Echinoids from the Caloosahatchee and Tamiami Formations of Florida. Smithsonian Miscellaneous Collections, 145(5):1-63, figures 1-58, plates 1-18.
- 1964a. Clypeaster romani, New Name for C. crassus, Kier, 1963, not L. Agassiz, 1840. Journal of Paleontology, 38(3):610.
- 1964b. Fossil Echinoids from the Marshall Islands. United States Geological Survey Professional Paper, 260-GG:1121-1126, figures 328-331, plate 302.
- 1965. Evolutionary Trends in Paleozoic Echinoids. *Journal* of Paleontology, 39(3):436–465, figures 1–26, plates 55–60.
- 1966a. A New Echinoid from the Cretaceous Pierre Shale of Eastern Wyoming. *United States Geological Survey Professional Paper*, 393-A:A62-A65, figure 17.
- 1966b. Four New Eocene Echinoids from Barbados. Smithsonian Miscellaneous Collections, 151(9):1-28, figures 1-16, plate 1.

- 1967. Sexual Dimorphism in an Eocene Echinoid. *Journal* of *Paleontology*, 41(4):990–993, figures 1-3, plates 129–130.
- 1968a. The Triassic Echinoids of North America. *Journal* of *Paleontology*, 42(4):1000-1006, figure 1, plates 121-123.
- 1968b. Echinoids from the Middle Eocene Lake City Formation of Georgia. Smithsonian Miscellaneous Collections, 153(2):1-45, figures 1-44, plates 1-10.

Kier, P. M., and R. E. Grant

1965. Echinoid Distribution and Habits, Key Largo Coral Reef Preserve, Florida. Smithsonian Miscellaneous Collections, 149(6):1-68, figures 1-15, plates 1-16.

Koechlin, E.

- 1947. Demonstration eines neuen Glypticus aus dem Berner Jura. Verhandlungen der Schweizerischen Naturforschenden Gesellschaft, 127:83.
- 1948. Glypticus buxtorfi n. sp. aus dem Sequan vom Mont Chaibeux bei Delsberg. Eclogae Geologicae Helvetiae, 40(2):334-336, figures 1-2.

Koehler, R.

- 1926. Echinodermata Echinoidea. Pages 1-134 in volume 8, part 3, in Launcelot Harrison, editor, Scientific Reports, Series C, Zoology and Botany, in Australasian Antarctic Expedition, 1911-1914, under the Leadership of Sir Douglas Mawson, D.Sc., B.E., F.R.S. Plates 91-124. Sydney: Alfred J. Kent, Government Printer.
- 1927. Échinides du Musée Indien à Calcutta, III: Échinides réguliers. Echinoderma of the Indian Museum, 10:1-158, plates 1-27.

Kongiel, R.

- 1935. Contribution à l'étude du "Siwak" dans les environs de Pulawy (Plateau de Lublin). Travaux de la Société des Sciences et des Lettres de Wilno, 9(19): 1-57, 3 figures, 8 plates.
- 1936a. Sur quelques Échinides nouveaux du Crétacé supérieur des environs de Pulawy, Pologne. Travaux de la Société des Sciences et des Lettres de Wilno, 10(22):1-10.
- 1936b. Sur quelques Échinides de la Craie supérieure de Krasne Siolo près Wolkowysk. Travaux de la Société des Sciences et des Lettres de Wilno, 10(23):1-12, plates 1-3.
- 1939. Notes pour servir à l'étude des Échinides Crétacés de Pologne, I: Échinides réguliers. Travaux de la Société des Sciences et des Lettres de Wilno, Classe des Sciences mathématiques et naturelles. Travaux de l'Institut de Géologie de l'Université de Wilno (new series), 13(8):1-54, plates 1-3.
- 1949. Les Echinocorys du Danien de Danemark, de Suède et de Pologne. Travaux du Service Géologique de Pologne, 5:1-89, figures 1-61, plates 1-18.
- 1950. O kilku nowych ježoweach z górnego mastrychtu okolic Pulaw. Acta Geologica Polonica, 1(3):311-326, plates 1-2.
- 1957. Remarques sur les échinides suprajurassiques de Czarnoglow et de Swietoszewo en poméranie occidentale. Bulletin de la Service Géologique de Pologne, 105(1):5-74, plates 1-7.

1958. Sur les radioles des Échinides des couches à Crania tuberculata Nilss. à Boryszew près de Sochaczew. Prace Muzeum Ziemi (Instytut Geologiczny Muzeum Ziemi), 2:3-30, figures 1-7, plate 1.

Kongiel, R., and L. Matweijewówna

1937. Materiaux fauniques de la Craie supérieure des environs de Pulawy. Travaux de la Société des Sciences et des Lettres de Wilno, 11:115-148, plates 5-7.

Körner, K.

1937. Marine (Cassianer-Raibler) Trias am Nevado de Acrotambo (Nord-Peru). Palaeontographica, 86A: 145-240, figures 1-6, plates 10-14.

Köster, E.

1950. Formveranderungen von Echinocorys sulcatus (Goldfuss, 1826-33). Geologiska Föreningens I Stockholm Förhandlingar, 72(4):437-453, figures 1-6.

Krau, L.

- 1952. Sôbre uma nova espécie de echinoidea Clypeaster oliveirai (ordem Clypeastroida). Memórias do Instituto Oswaldo Cruz, 50:703-712, figure 1, plates 1-7.
- 1954. Nova espécie de Ouriço do Mar: Cassidulus mitis, Ordem Cassiduloida, Echinoidea, capturado no Bala de Sepetibá. Memórias do Instituto Oswaldo Cruz, 52(2):455-475, plates 1-6.
- 1960. Nova espécie de ouriço do mar capturado na baia de Sepetibá (Cassiduloidea, Echinoidea). Memórias do Instituto Oswaldo Cruz, 58(2):157-159, plates 1-4.

Krenkel, H.

1928. Die regulären Echiniden der pommerschen Kreide. Abhandlungen aus dem geologisch-palaeontologischen Institut der Universität Greifswald, 7:1-32, figures 1-6, plates 1-3.

Kristan-Tollmann, E., A. Tollmann, and J. Geyssant

1969. Zur Schichtfolge und Fossilführung des Zentralalpinen (unterostalpinen) Rhät der Tarntaler Berge in Tirol. Jahrbuch der Geologischen Bundesanstalt, 112(1):1-29, figure 1, plates 1-6.

Kühn, O.

- 1925. Die Echinodermen der Gosauformation. Annalen des Naturhistorischen Museums in Wien, 39:177-189, figures 1-2, plate 11.
- 1936. Eine neue Burdiglausbildung bei Horn. Sitzungsberichte, Akademie der Wissenschaften in Wien, 145(I):35-45, figures 1-3, plate 1.

Kutassy, E.

1928. A borsodmegyei Királd barnaszén-medencéje. Földtani Szemle, 1(5):253–272, figures 23–25.

Lambert, J.

- 1924a. Note sur les Échinides de la collection Ambayrac. Riviera Scientifique (Nice), 2(1):3-8, figures 1-4.
- 1924b. Sur un échinide nouveau du Bassin de Paris. Bulletin de la Société Géologique de France, (4)24(11):98, figure 1.
- 1924c. Sur un échinide nouveau du Rhétien des Préalpes bernoises. *Eclogae Geologicae Helvetiae*, 18(3):448-450, figures 1-2.
- 1926a. Note sur un Acrocidaris, recueilli par le Ct. Caziot au Mont-Boron près Nice. Riviera Scientifique (Nice), 13:72-74, figures 1-2.

- 1926b. Note sur un Échinide nouveau du Bajocien de Liestal. Naturforschende Gesellschaft Baselland Tatigkeitsbericht, 7:118-122, plate 10.
- 1927a. Considérations sur les Échinides de la Commanche Série du Texas. Bulletin de la Société Geologique de France, (14)26(3-5):263-272.
- 1927b. Révision des Échinides fossiles de la Catalogne. Memorias del Museo de Ciencias Naturales de Barcelona (Serie Geologica), 1(1):1-102, figures 1-10, plates 1-4.
- 1927c. Sur quelques échinides du Tithonique et de l'Eocrétacé des environs de Chambéry. Bulletin de la Société Géologique de France, (4)27(3-5):361-377, figures 1-6.
- 1928a. Notes sur quelques échinides du Crétacé d'Espagne communiqués par M. le Prof. Royo y Gomez. Boletin de la Real Sociedad Española de Historia Natural, 28(3):147-157, figure 1, plate 3.
- 1928b. Révision des échinides fossiles du Bordelais, III: Échinides du Miocène. Actes de la Société Linnéenne de Bordeaux, 79(2):71-132, figures 1-8.
- 1928c. Sur deux Échinides fossiles de Cuba. Bulletin de la Société Géologique de France, (4)28(1-2): 19-21, figures 1-2.
- 1928d. Sur un Échinide nouveau des couches à Stegarter de Gan. Compte Rendu Sommaire des Séances de la Société Géologique de France, 1928(16):263-265, figures 1-2.
- 1928e. Révision des Échinides Fossiles de la Catalogne. Memorias del Museo de Ciencias Naturales de Barcelona (Serie Geologica), 1(2):1-62, plates 5-8.
- 1929. Sur les Échinides éocènes de Madagascar. Comptes Rendus des Séances de l'Académie des Sciences, 189(4):192-194, figures 1-4.
- 1931a. Échinides crétacés de la région d'Héraclée. Annales de la Société Géologique de Belgique, Memoires, 54:M2-M12, figures 1-3, plate 1.
- 1931b. Échinides du Lias du Moyen Atlas Marocain. Protectorat de la République Française au Maroc, Service des Mines et de la Carte Géologique, Notes et Mémoires, 17:1-25, figures 1-3, plates 1-2.
- 1931c. Étude sur les échinides fossiles du Nord de l'Afrique.

 Mémoires de la Société Géologique de France,

 Mémoire 16, (new series) 7(2):1-108, plates 1-4.
- 1931d. Étude sur les échinides fossiles du Nord de l'Afrique. Mémoires de la Société Géologique de France, Mémoire 16, (new series) 7(4):109-228, plates 5-8.
- 1931e. Note sur le groupe des Oligopygus, la nouvelle famille des Haimeidae et sur quelques Échinides fossiles de Cuba. Bulletin de la Société Géologique de France, (5)1:289-304, figures 1-3, plate 17.
- 1932. Sur quelques échinides du Tithonique et de l'Éocrétacé des environs de Chambéry. Bulletin de Société d'Histoire Naturelle de Savoie, 22:250-263.
- 1933a. Échinides de Madagascar communiqués par M. H. Besairie. Annales Géologiques du Service des Mines, Madagascar, 3:1-49, figures 1-8, plates 1-4.
- 1933b. Échinides Fossiles du Maroc. Protectorat de la République Française au Maroc, Service des Mines et

- de la Carte Géologique, Notes et Mémoires, 27:27-79, figures 1-3, plates 1-3.
- 1933c. Note sur quelques Échinides de la région de Chatillon-sur-Seine. Bulletin de la Société Géologique de France, Notes et Mémoires, (5)3:173-180, figure 1, plate 7.
- 1933d. Supplément à la révision des échinides fossiles de la Catalogne. Butlletí de la Institució Catalana d'Història Natural, 33(4-5):183-195, figures 1-2, plate 4.
- 1934. Appendice sur un clypeaster de l'Angola. Boletim do Museu e Laboratório Mineralógico e Geológico da Universidade de Lisboa, (1)3:247-248, plate 5.
- 1935a. Note sur les Échinides jurassiques et les oscillations du détroit poitevin. Bulletin de la Société Géologique de France, (5)4(6-7):523-536, plates 26-27.
- 1935b. Sur quelques échinides fossiles de Valence et d'Alicante communiqués par M. le Prof. Darder Pericás. Boletin de la Sociedad Española de Historia Natural, 35(7):359-371, plates 41-42.
- 1935c. Notes sur quelques Échinides fossiles, I: Échinides du Djebel Outaia; II: Sur un *Echinolampus* du Désert Libyque; III: Échinides du Mexique recueillis par M. F. Mulerried. *Bulletin de la Société Géologique de France*, (5)5(4–5):359–368, figure 1, plate 16.
- 1935d. Notes sur quelques Échinides fossiles, III: Échinides du Mexique recueillis par M. F. Mullerried. Bulletin de la Société Géologique de France, (5)5(6-7):369-374, figure 2, plate 16.
- 1935e. Sur quelques nouveaux échinides fossiles d'Égypte. Bulletin de l'Institut d'Égypte, 18(1):39-43, plate 1.
- 1935f. Échinides crétacés d'Espagne, I: Sur quelques Échinides crétacés des provinces de Burgos, Palencia et Leon, communiqués par M. Raymond Ciry; II: Sur quelques Échinides crétacés d'Espagne, communiqués par M. le Prof. Royo y Gómez. Boletin de la Sociedad Española de Historia Natural, 35(10): 513-526, plates 57-58.
- 1936a. Échinides du Sénonien supérieur et de l'Éocène. In Besairie, H., La Géologie du Nord-Ouest, I: Recherches géologiques à Madagascar. Mémoires de l'Academie Malgache, 21:205-207, plate 24.
- 1936b. Les Échinides du Bajocien du Plateau de l'Ankara. In Besairie, H., La géologie du Nord-Ouest, I: Recherches géologiques à Madagascar. Mémoires de l'Académie Malgache, 21:116-120, plate 6.
- 1936c. Nouveaux Échinides fossiles de Madagascar. Annales Géologiques du Service des Mines Madagascar, 6:1-32, plates 1-4.
- 1936d. Observations critiques sur quelques Hemiaster du Sud-Ouest de la France. Bulletin de la Société d'Histoire Naturelle de Toulouse, 69(1):77-94, figure 1, plate 6.
- 1936e. Quelques nouveaux Échinides fossiles du Crétacé du Mexique. Bulletin de la Société Géologique de France, (5)6(1-3):3-6, plate 1.
- 1937. Échinides fossiles du Maroc. Protectorat de la République Française au Maroc, Direction Générale des Travaux Publics, Service des Mines et de la

- Carte Géologique, Notes et Mémoires, 39:1-109, figures 1-4, plates 1-4.
- 1938a. Note sur quelques Échinides fossiles communiqués par MM. Dalloni et Schoeller. Bulletin de la Société Géologique de France, (5)8(3-4):273-286, figure 1, plate 19.
- 1938b. Une neuvelle variété de l'Heterodiadema libycum Desor, du Cenomanien superieur de Tamaïa (Niger). Bulletin de la Société Géologique de France, (5)8(1-2):87-89, plate 6.

Lambert, J., and F. Charles

1937. Échinides crétacés de la région de Djidde (Anatolie). Bulletin de la Société Belge de Géologie de Paléontologie et Hydrologie, 47(2):377-401, figures 1-6, plates 8-9.

Lambert, J., in Lambert, J., and F. Jacquet

1936. Les échinides fossiles du Sénégal. Bulletin de la Société Géologique de France, (5)6(6-8):339-361, plates 21-23.

Lambert, J., and A. Jeannet

- 1928a. Contribution à la connaissance des échinidés tertiaires des Iles de la Sonde (Java, Bornéo, Soembawa et Timor). Verhandlungen Schweizerische Naturforschende Gesellschaft, 109:219.
- 1928b. Nouveau catalogue des moules d'échinides fossiles du musée d'histoire naturelle de Neuchâtel. Mémoires de la Société Helvétique des Sciences Naturelles, 64(2):79-233, plates 1-2.

1935. Contribution à l'étude des Échinides tertiaires des iles de la Sonde. Mémoires de la Société Paléontologique Suisse, 56:1-62, figures 1-75, plates 1-4.

Lambert, J., and V. Pérébaskine

1929. Note sur quelques échinides du Soudan. Bulletin de la Société Géologique de France, (4)29(6-7):471-477, plate 38.

Lambert, J., and M. Sánchez Roig

1934. Nueva especie fosil del genero "Clypeaster." Revista de Agriculture, Comercio y Trabajo, 14(51):22-24, 2 figures.

Lambert, J., and P. Thiéry

1909-1925. Essai de Nomenclature Raisonnée des Échinides. 607 pages, 15 plates. Chaumont: Librairie L. Ferrière.

Lambert, J., and A. Valette

1934. Études sur quelques echinodermes crétacés de Bugarach (Aude). Bulletin de la Société Géologique de France, (5)4:43-60, plate 6.

Laureri, S.

1962. Nuovi echinidi elveziani della media Val d'Enza (Reggio Emilia). Bollettino della Società Geologica Italiana, 81(1):93–122, plates 1–4.

Lees G. M

1928. The Geology and Tectonics of Oman and of Parts of South-Eastern Arabia. Quarterly Journal of the Geological Society, 84(4)(336):585-670, figures 1-12, plates 41-51.

Leonardi, P., and M. Lovo

1950. Nuove forme di echinodermi della fauna cassiana di Cortina d'Ampezzo. Studi Trentini di Scienze Naturali, 27(1-3):3-10, plates 1-2.

Linck, O.

1955. Ein bemerkenswerter Seeigel-Rest (Miocidaris pakistanensis n. sp.) aus der Unter-Trias der Salt Range (Pakistan). Neues Jahrbuch für Geologie und Paläontologie, 10:489-495, figures 1-4.

Lobacheva, S. V., and E. S. Poretskaya

1967. A New Epiaster from Turkmenia—The Oldest Representative of the Genus. Vsesoiuznyi nauchnoissledovatel'skii geologicheskii institut, (new series), 129(3):182-187, figures 1-2, plate 1, table 1.

Loel, W., and W. H. Corey

1932. The Vaqueros Formation, Lower Miocene of California, I: Paleontology. University of California Publications, Bulletin of the Department of Geological Sciences, 22(3):31-410, plates 4-65.

Lörcher, E.

1930. Neue Seeigelfunde aus dem Jura Württembergs. Neues Jahrbuch für Mineralogie, Geologie und Paläontologie, 64(B):255-270, figures 1-2, plates 18-19.

MacBride, E. W., and W. K. Spencer

1938. Two New Echinoidea, Aulechinus and Ectinechinus, and an Adult Plated Holothurian, Eothuria, from the Upper Ordovician of Girvan, Scotland. Philosophical Transactions of the Royal Society of London, (B)229(558):91-136, figures 1-15, plates 10-17.

Maccagno, A. M.

- 1941. Osservazioni sul genere Somaliaster Haw. Bollettino della Società Geologica Italiana, 60(1):89-98, figures 1-3, plate 11.
- 1947a. Nuova specie di Schizaster nel macco di Palo (Lazio).

 Bollettino della Società Geologica Italiana, 65(1):
 115-121, plate 1.
- 1947b. Illustrazione degli echinidi giurassici della Somalia.

 Atti della Accademia Nazionale dei Lincei
 (Memorie), (8)1:99-136, figures 1-4, plate 1.
- 1947c. Echinidi giurassici dell'Harar. Bollettino dell'Ufficio geologico d'Italia, 70 (part 1: Geologia, 4):79-101, plates 1-2.

Maczyńska, S. S.

- 1958. Cenomanian and Turonian Echinoids of Genus Discoidea from the Vicinity of Kraków, Miechów and Wolbrom. Prace Muzeum Ziemi (Instytut Geologiczny Muzeum Ziemi), 2:81-115, figures 1-36, plates 1-9.
- 1962. On Echinoids of the Genus Pyrina from the Cenomanian in the Vicinity of Kraków, Miechów, and Wolbrom. Prace Muzeum Ziemi (Polska Akademia Nauk Muzeum Ziemi), 5:149-186, figures 1-29, plates 1-6.
- 1968. Echinoids of the Genus Micraster L. Agassiz from the Upper Cretaceous of the Craców-Miechów area.

 Prace Muzeum Ziemi (Polska Akademia Nauk Muzeum Ziemi), 12:87-168, figures 1-22, plates 1-28.

Madsen, F. J.

1957. On a New Species of Meoma, and on a Few Other Echinoids from Tropical West Africa. Bulletin de l'Institut Français d'Afrique Noire, (A)19(2):474-481, figures 1-3.

NUMBER 34

Maillieux, E.

1935. Contribution à l'étude des Échinoides du Frasnien de la Belgique. Mémoires du Musée Royal d'Histoire Naturelle de Belgique, 65:1-14, plates 1-2.

1940. Les Échinodermes du Frasnien de la Belgique. Mémoires du Musée Royal d'Histoire Naturelle de Belgique, 92:1-46, plates 1-3.

Malaroda, R.

1951. Il lattorfiano del Monteccio di Costozza (Colli Berici). Parte Prima: I macrofossili. Memorie del Museo Civico di Storia Naturale di Verona, 2:147-210, figures 1-11, plates 1-7.

Maldonado-Koerdell, M.

1953. Los equinoides regulares del Mesozoico de México. Anales de la Escuela Nacional de Ciencias Biologicas, 7(1-4):15-43, plates 1-2.

Männil, R.

1962. The Taxonomy and Morphology of Bothriocidaris (Echinoidea). Esti NSV Teaduste Akadeemia Geoloogia Instituudi Uurimused, 9:143-190, figures 1-22, plates 1-5.

Mansfield, W. C.

1932. Pliocene Fossils from Limestone in Southern Florida.

United States Geological Survey Professional Paper,
170-D:7 pages, 5 plates.

Marchesini Santos, M.E.C.

1958. Equinóides Miocênios da formação Pirabas. Divisão de Geologia e Mineralogia Boletim, 179:1-24, plates 1-5.

1960. Equinóides Cretácicos do Rio Grande do Norte.

Divisão de Geologia e Mineralogia Boletim, 189:126, figures 1-8, plates 1-5.

Marchesini Santos, M. E. C., and F. L. de Souza Cunha

1959. Sôbre Hemiaster jacksoni Maury e outros equinóides do cretácico brasileiro. Divisão de Geologia e Mineralogia Boletim (Rio de Janeiro), 186:1-19, plates 1-3.

Martin, K.

1919. Unsere palaeozoologische Kenntnis von Java mit einleitenden Bemerkungen über die Geologie der Insel. E. J. Brill, editor. 156 pages, 4 plates. Leiden.

Masuda, K.

1971. Amussiopecten from North America and Northern South America. Transactions and Proceedings of the Palaeontological Society of Japan, 84:205-224.

Mathieu, G.

1949. Géologie régionale des environs de Matmata Medenine et Foum-Tatahouine. In Contribution à l'étude des Monts Troglodytes dans l'extrême Sud-Tunisien. Annales des Mines et de la Géologie, (1)4:1-82, figures 1-11, plates 1-3.

Maury, C. J.

1925. Fosseis terciarios do Brasil com descripção de novas formas cretaceas. Monographias do Serviço Geologico e Mineralogico do Brazil, 4:1-705, plates 1-24.

1930. O cretaceo da Parahyba do Norte. Monographie do Serviço Geologico e Mineralogico do Brazil, 8:1-305, plates 1-35.

1934a. Fossil Invertebrata from Northeastern Brazil. Bulletin of the American Museum of Natural History, 67(4):123-179, plates 9-19.

1934b. Lovenilampas, a New Echinoidean Genus from the Cretaceous of Brazil. American Museum Novitates, 744:1-5, figure 1.

1936. O Cretaceo de Sergipe. Monographias do Serviço Geologico e Mineralogico, 11:1-283, plates 1-28.

Meffert, B.

1931. La faune éocène du Daralaghez en Arménie. Transactions of the Geological and Prospecting Service of U.S.S.R., 99:1-64, figures 1-6, plates 1-8.

Melikov, O. G., and L. G. Endel'man

1963. A New Echinoid from the Lower Maestrichtian of the Caucasus. *Paleontologicheskii Zhurnal*, 4:135–138, figures 1–2.

Melinossi, R.

1935. Su di un echinide della Patagonia. Atti della Società Toscana di Scienze Naturali, Processi Verbali, 44(2): 32-39, figures 1a-b, 2.

Melville, R. V.

1952. On a New Species of Irregular Echinoid (*Plagiochasma coxwellense* sp. nov.) from the Lower Greensand of Faringdon, Berks. *Bulletin of the Geological Survey of Great Britain*, 4:1-7, figure 1, plate 1.

1955. Echinotiara arabica sp. nov., a Regular Echinoid from the Toarcian of Central Arabia. Geological Magazine, 92(5):393-401, figures 1-7, plate 19.

Mercier, J.

1931. Notes échinologiques, VIII: Rhabdocidaris bigoti (Cidaridae, Stereocidaridae, Rhabdocidarinae), espèce nouvelle du Bathonien supérieur de la Sarthe. Bulletin de la Société Linnéenne de Normandie, (8)3:94-97, figures 1-4.

1932. Études sur les échinides du Bathonien de la bordure occidentale du Bassin de Paris. Mémoires de la Société Linnéenne de Normandie, (new series, geology section) 2:1-273, figures 1-34, plates 1-11.

1935. Note sur quelques Échinides jurassiques. Bulletin de la Société Linnéenne de Normandie, (8)7:27-30.

1937a. Deux genres nouveaux d'Échinides du Lias. Bulletin de la Société Géologique de France, (5)6(6-8):419-442, figures 1-2.

1937b. Les échinides de la couche à Leptaena du Toarcian de May-sur-Orne (Calvados). Bulletin de la Société Linnéenne de Normandie, (8)9:95-97.

1937c. Les Échinides du Lias de la bordure du Massif Armoricain. Bulletin de la Société Géologique de Normandie et des Amis du Museum du Havre, 39:12-42, plate 1.

Meyer, H. von

1847. Mittheilungen an Professor Bronn gerichtet. Neues Jahrbuch für Mineralogie, Geognosie, Geologie, und Petrefakten-Kunde (Stuttgart), 1847:572-580.

Meznerics, L.

1941. Neue Stachelhäuter (Echindermen) aus dem Miocän Ungarns. Annales Historico-Naturales Musei Nationalis Hungarici, 34:83-96, plates 1-3.

Miller, A. K.

1928. A New Echinoid from the Sundance of West-Central Wyoming. American Journal of Science, (5)16(92): 143-146, figures 1-4.

1929. Ancylocidaris, a New Echinoid Genus from the Sundance of West-Central Wyoming. American Journal of Science, (5)18(106):334-336, figures 1-3.

Minato, M.

1950. On Some Palaeogene Fossils in Hokkaido. The Journal of the Geological Society of Japan, 56(654): 157-159, figures 1-3.

Mintz, L. W.

1967. The Origins, Phylogeny, Descendants of the Echinoid Family Disasteridae A. Gras, 1848. (Abstract.) Dissertation Abstracts, 27B:2747-2748.

1968. Echinoids of the Mesozoic Families Collyritidae d'Orbigny, 1853 and Disasteridae Gras, 1848. Journal of Paleontology, 42(5):1272-1288, figures 1-6.

Mirigliano, G.

1938. Echinolampas delorenzoi. Revista Italiana di Paleontologia, 44(1-2):46-50, figure 1, plate 1.

1957. Scutella montagnai n. sp. (Echinoidea, Clypeastroidea). Bollettino di Zoologia, 24:9-15, figure 1, plate 1.

Mitzopoulos, M. K.

1960. Die Echiniden de Attischen Kreide am Skironischen Engpass. Praktika, Akademia Athens, 35(2):280-289, plates 1-3.

Molengraaff, G. J. H.

1929. Beschrijving van de Echiniden uit het Boven-Eoceen van Curaçao, Pages 72-83 in Geologie en Geohydrologie van het Eiland Curaçao. Plates 25-28.

Montanaro-Gallitelli, E., and Z. Lang

1937. Celenterati, Echinodermi e Brachipodi del Cretaceo mediosuperiore dello Zululand. *Palaeontographia Italica*, 37:193-210, plate 9.

Morishita, A.

1952. Fossil Astriclypeus from Japan. Memoirs of the College of Science, University of Kyoto, (B)20(2): 107-114, figures 1-2, plate 11.

1953. On Some Neogene Echinoids from Nagano Prefecture, Japan. Memoirs of the College of Science, University of Kyoto, (B)20(4):217-226, figures 1-4, plate 1.

1955. Notes on Echinarachnius in Japan. Memoirs of the College of Science, University of Kyoto, (B)22(2):223-236, figures 1-2, plates 8-11.

1956. On Some Fossil Echinoids from Kyusyu, Japan.

Memoirs of the College of Science, University of
Kyoto, (B)23(2):193-202, plates 1-4.

1957. On Some Fossil Echinoids of Japan, I: Brissopsis and Eupatagus. Memoirs of the College of Science, University of Kyoto, (B)24(2):161-164, plate 1.

1962. Cretaceous Echinoid Hemiaster from Shikoku, Japan. Number II in On Some Fossil Echinoids of Japan. The Journal of Earth Sciences, Nagoya University, 10(2):113-116, plate 1.

1965. New Species of Salenia from the Miocene of Japan. Number IV in On Fossil Echinoids of Japan. Transactions and Proceedings of the Palaeontological Society of Japan, (new series) 58:64-66, figures 1-5. Mortensen, T.

1925. Papers from Dr. Th. Mortensen's Pacific Expedition 1914-16, XXIX: Echinoderms of New Zealand and the Auckland-Campbell Islands, III-V: Asteroidea, Holothurioidea and Crinoidea. Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København, 79:261-420, figures 1-70, plates 12-14.

1926. A New West Indian Cidarid. University of Iowa Studies in Natural History, 11(7):5-8, plates 1-4.

1927a. A New Species of the Genus Echinarachnius from Japan. Annotationes Zoologicae Japonenses, 11(3): 195-200, figures 1-2, plate 1.

1927b. Report on the Echinoidea Collected by the United States Fisheries Steamer "Albatross" during the Philippine Expedition, 1907-1910, Part I: The Cidaridae. *United States National Museum Bulletin* 100, 6(4):241-312, figures 1-22, plates 48-80.

1927c. Sur les échinides recueillis par l'expedition du "Travailleur" et du "Talisman." Archives du Muséum d'Histoire Naturelle, (6)2:21-34, figures 1-12, plates 1-2.

1928. Papers from Dr. Th. Mortensen's Pacific Expedition 1914-16, xliv: New Cidaridae. (Preliminary Notice.) Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København, 85:65-74.

1930. Some New Japanese Echinoids. Annotationes Zoologicae Japonenses, 12(2):387-404, 2 figures, plates 1-4.

1932a. On the Salenidae of the Upper Cretaceous Deposits of Scania, Southern Sweden. Geologiska Föreningens I Stockholm Förhandlingar, 54(4):471-497, 24 figures, plates 4-5.

1932b. New Contributions to the Knowledge of the Cidarids, I: Notes on Some Recent Cidarids. Det Kongelige Danske Videnskabernes Selskabs Skrifter, Naturvidenskabelig og mathematisk Afdeling, (9)4(4):145-174, figures 1-13, plates 1-13.

1933. Papers from Dr. Th. Mortensen's Pacific Expedition 1914–16, lxvi: The Echinoderms of St. Helena (Other Than Crinoids). Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København, 93:401–473, figures 1–29, plates 20–22.

1934a. New Echinoidea. (Preliminary Notice.) Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København, 98:161-167.

1934b. Notes on Some Fossil Echinoids. Geological Magazine, 71(9):393-407, 7 figures, plates 21-22.

1936a. Echinoidea and Ophiuroidea. Discovery Reports, 12: 199–348, figures 1–53, plates 1–9.

1936b. Phyllacanthus forcipulatus, sp. nov., a New Cidarid from the Indian Ocean. Records of the Indian Museum (Calcutta), 38(3):307-309, 1 figure, plates 10-12.

1937. Some Echinoderm Remains from the Jurassic of Württemberg. *Biologiske Meddelelser*, 13(10):1-28, figure 1, plates 1-4.

1939a. New Echinoidea (Aulodonta). (Preliminary Notice.) Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København, 103:547-550.

- 1939b. Report on the Echinoidea of the Murray Expedition, Part I. The John Murray Expedition 1933-34 Scientific Reports, 6(1):1-28, figures 1-10, plates 1-6.
- 1939c. Two New Deepsea Echinoderms from the Red Sea. *Publications of the Marine Biological Station Ghardaqa (Red Sea)* (Cairo), 1:37-46, figures 1-5, plates 3-4.
- 1940a. Contributions to the Biology of the Philippine Archipelago and Adjacent Regions. Part 2 in Report on the Echinoidea Collected by the United States Fisheries Steamer "Albatross" during the Philippine Expedition, 1907-1910. United States National Museum Bulletin 100, 14(1):1-52, figures 1-3, plate 1.
- 1940b. Aulodonta. Number 1 of volume 3 in Mortensen, A Monograph of the Echinoidea. 370 pages, 197 figures, 77 plates. Copenhagen: C. A. Reitzel.
- 1940c. Echinoderms from the Iranian Gulf: Asteroidea, Ophiuroidea, and Echinoidea. Danish Scientific Investigations in Iran, 2:55-112, figures 1-24, plates 1-2.
- 1942. New Echinoidea (Camarodonta). (Preliminary Notice.) Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København, 106:225-232.
- 1943a. Camarodonta. Number 2 of volume 3 in Mortensen, A Monograph of the Echinoidea. 553 pages, 321 figures, 56 plates. Copenhagen: C. A. Reitzel.
- 1943b. Camarodonta. Number 3 of volume 3 in Mortensen, A Monograph of the Echinoidea. 445 pages, 215 figures, 66 plates. Copenhagen: C. A. Reitzel.
- 1948a. Report on the Echinoidea Collected by the United States Fisheries Steamer "Albatross" during the Philippine Expedition, 1907-1910, Part 3: The Echinoneidae, Echinolampadidae, Clypeastridae, Arachnoididae, Laganidae, Fibularidae, Urechinidae, Echinocorythidae, Palaeostomatidae, Micrasteridae, Palaeopneustidae, Hemiasteridae, Spatangidae. United States National Museum Bulletin 100, 14(3):89-140.
- 1948b. Report on the Echinoidea of the Murray Expedition, Part 2. The John Murray Expedition 1933-34 Scientific Reports, 9(1):1-15, plate 1.
- 1948c. Holectypoida, Cassiduloidea. Number 1 of volume 4 in Mortensen, A Monograph of the Echinoidea. 371 pages, 326 figures, 14 plates. Copenhagen: C. A. Reitzel.
- 1948d. Clypeastroida, Clypeastridae, Arachnoididae, Fibularidae, Laganidae and Scutellidae. Number 2 of volume 4 in Mortensen, A Monograph of the Echinoidea. 471 pages, 258 figures, 72 plates. Copenhagen: C. A. Reitzel. [Zoological Record says: "Some spp. and vars. in Mortensen's 'A Monograph of the Echinoidea, 4(1) and 4(2), are recorded in the Systematic Index as nov., although they are not stated to be so by Mortensen. The Preliminary Notice by Mortensen in which these names were intended to be proposed did not appear until 1949."]
- 1948e. New Echinoidea (Cassiduloida, Clypeastroida). (Preliminary Notice.) Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København, 111: 67-72.

- 1950a. Echinoidea. B.A.N.Z. Antarctic Research Expedition 1929-1931 Reports—Series B (Zoology and Botany), 4(10):287-310, figures 1-6, plates 4-9.
- 1950b. New Echinoidea (Spatangoidea). (Preliminary Notice.) Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i København, 112:157-163.
- 1951. Report on the Echinoidea Collected by the "Atlantide" Expedition. Atlantide Report, 2:293-303, figure 1, plates 1-2.

Mortensen, T., and J. Mercier

1939. Remarques sur le genre Jacquiertia. Bulletin de la Société Linnéenne de Normandie, (9)1:58-61, figures 1-2.

Moskvin, M. M.

1959. Atlas of the Upper Cretaceous Fauna of the Northern Caucasus and Crimea. Gas Industry of the U.S.S.R. (Moscow), 1-500, figures 1-109, 91 plates.

Mullerried, F.K.G.

1951. Algunos fosiles marinos del Terciario inferior y medio de Palenque, Chiapas. Revista de la Sociedad Mexicana de Historia Natural, 12(1-4):209-227, figures 1-7.

Nagao, T.

1928. Palaeogene Fossils of the Islands of Kyûshû, Japan, Part 2. Science Reports of the Tôhoku Imperial University (Sendai, Japan), (Second Series, Geology), 12(1):11-140, plates 1-23.

Nestler, H.

1965. Echiniden aus dem Inter-Maastricht der Insel Rügen,
I: Die Saleniiden. Geologie, 14(8):982-1003, figures
1-9, plates 1-5.

Nielsen, K. B.

- 1926. Kalken paa Saltholm. Danmarks geologiske Undersøgelse, (4)1(20):1-23, figures 1-8.
- 1942. Martinosigra elongata n. g. et n. sp., a New Echinoid from the White Chalk of Denmark. Meddelelser fra Dansk Geologisk Forening, 10(2):159-166, plates 1-2.

Nisiyama, S.

- 1935. On Some Fossil Echinoids from Northeastern Japan. Saito Ho-on Kai Museum Research Bulletin, 5:131-172, figures 1-13, plate 8.
- 1937. A New Species of Sismondia from the Oligocene of Titi-zima. Proceedings of the Imperial Academy, 13(2):41-45, figures 1-15.
- 1940- On the Japanese Species of Echinarachnius. Jubilee
- 1941. Publication in the Commemoration of Professor H. Yabe, 2:803-862, figures 1-65, 43-45.
- 1948. Astrodapsis in Japan. Journal of Paleontology, 22(5): 601-605, plate 88.
- 1950a. Two New Species of the Toxasteridae from Japan. Short Papers of the Institute of Geology and Paleontology, Tôhoku University (Sendai), 1:42-47, figures 1-6.
- 1950b. Fossil Echinoidea from the Miyako Cretaceous. Short Papers of the Institute of Geology and Paleontology, Tôhoku University (Sendai), 2:29-38, figures 1-3, plate 4.

- 1951. A New Scaphechinus from North-East Japan. Saito Ho-on Kai Museum Research Bulletin, 21:3-5, figures 1-3.
- 1966. The Echinoid Fauna from Japan and Adjacent Regions, Part 1. Palaeontological Society of Japan Special Papers, 11:1-277, figures 1-25, plates 1-18.
- 1968. The Echinoid Fauna from Japan and Adjacent Regions, Part 2. Palaeontological Society of Japan Special Papers, 13:1-491, figures 26-77, plates 19-30.

Nisiyama, S., and W. Hashimoto

1950. A New Echinarachnius from the Tertiary of Hokkaido. Short Papers of the Institute of Geology and Paleontology, Tôhoku University (Sendai), 2:39-42, figures 1-3.

Ødum, H.

1926. Studier over Daniet i Jylland og paa Fyn. (Studies on the Cretaceous Formation Daninium in Jutland and Funen.) Danmarks geologiske Undersøgelse, 2(45):1-306, figures 1-29, plates 1-3.

Otuka, Y.

1938. Neogene Fossils of the Ihara District, Sizuoka Prefecture, Japan. Journal of the Faculty of Science, Imperial University of Tokyo, Section II Geology, 5(1):1-19, figures 1, a-e, plates 1-2.

Ozaki, K.

1939. On a New Species of Lower Carboniferous Echinoidea from Central Hunan, South China. Jubilee Publication in the Commemoration of Professor H. Yabe, M.I.A. Sixtieth Birthday, 1:563-567, plate 30.

Parnes, A.

1961. On the Occurrence of Pseudopygurus Lambert in Southern Israel. The Bulletin of the Research Council of Israel, 10G(1-2):216-222, figure 1, plate 1.

Paul, C.R.C.

1967. New Ordovician Bothriocidaridae from Girvan and a Reinterpretation of *Bothriocidaris* Eichwald. *Palaeontology*, 10(4):525-541, figures 1-6, plates 84-85.

Paulson, Jr., O. L.

1958. A New Species of the Eocene Echinoid *Periarchus*. *Journal of Paleontology*, 32(2):362-365, figures 1-8.

Pawson, D. L.

1964. A New Cidaroid from New Zealand Waters. Transactions of the Royal Society of New Zealand, 5(6): 67-70, figures 1-4, plate 1.

Péquignat, E.

- 1963. Sur un nouvel *Echinocardium* le Ligurie et de Provence: *Echinocardium fenauxi* n. sp. *Doriana*, 3(138): 1-9, figures 1-3.
- 1964. Description d'une espèce nouvelle de grande taille, reperée dans trois localitiés entre Marseille et Gênes: Echinocardium fenauxi Péquignat. In Sur les Echinocardium d'Europe. Bulletin de l'Institut Océanographique, 62(I291):1-22, figures 1-5, plates 1-2.

Petitot, M.-L.

1954. Sur une nouvelle espèce d'échinide irrégulier du Maroc: Pseudopygurus ambroggii nov. sp. Notes du Service Géologique du Maroc, 9(121):83-87, figures 1-2, plate 1.

1961 [1959]. Contribution à l'étude des échinides fossiles du Maroc (Jurassique et Crétacé). Notes et Mémoires du Service Géologique, (Maroc), 146:1-183, figures 1-6; atlas, 1-72, plates 1-17, tables 1-20, charts 1-7.

Philip, G. M.

- 1963a. Two Australian Tertiary Neolampadids and the Classification of Cassiduloid Echinoids. *Palaeontology*, 6(4):718-726, figures 1-2, plates 106-107.
- 1963b. A New Genus of Regular Echinoid from the Lower Eocene of British Somaliland. *Journal of Paleontology*, 37(5):1104-1109, figures 1-3.
- 1963c. A New Regular Echinoid from the Jurassic of Wyoming, U.S.A. Journal of Paleontology, 37(5): 1110-1115, figures 1-5.
- 1963d. The Tertiary Echinoids of Southeastern Australia, I: Introduction and Cidaridae (1). Proceedings of the Royal Society of Victoria, 76(2):181-226, figures 1-5, plates 21-26.
- 1964. The Tertiary Echinoids of Southeastern Australia, II: Cidaridae (2). Proceedings of the Royal Society of Victoria, 77(2):433-477, figures 1-6, plates 58-67.
- 1965. The Tertiary Echinoids of Southeastern Australia, III: Stirodonta, Aulodonta, and Camarodonta (1). Proceedings of the Royal Society of Victoria, 78(2): 181-196, figures 1-4, plates 26-29.
- 1969. The Tertiary Echinoids of South-Eastern Australia, IV: Camarodonta (2). Proceedings of the Royal Society of Victoria, (new series) 82(2):233-275, figures 1-8, plates 3-16.

Pijpers, P. J.

1933. Geology and Palaeontology of Bonaire (D.W.I.). Geographische en Geologische Mededeelingen, (Utrecht), 8:1-103, plates 1-2.

Pinar, N.

1951. Sur les oursins de l'Éocène moyen de Çatalcakaracoköy (Trakkya, Turquie). Bulletin de la Société Géologique de France, (6)1(1-3):35-54, figures 1-9, plate 1b.

Popiel-Barczyk, E.

1958. The Echinoid Genus Conulus from the Turonian from the Vicinity of Kraków, Miechów and Wolbrom.

Prace Muzeum Ziemi, 2:41-79, figures 1-36, plates 1-5.

Poretskaya, E. S.

- 1968a. Polyplacidia artenica—a New Genus and Species of Sea Urchin from South-Western Armenia. Ezhegodnik Vsesouznoe Paleontologicheskoe Obschchestvo, 18: 286–297, figures 1-6, plates 1-2. [Note: error in original, new species is armenica not artenica.]
- 1968b. A New Callovian Collyrites from Central Asia. In Markovsky, B. P. editor, New Species of Prehistoric Plants and Invertebrates of the U.S.S.R. Vsesoiuznyi nauchno-issledovatel'skii geologicheskii institut, ministerstvo geologii i okhrany nedr SSR, 2(2):286-287, figures 37-38, plate 67.

Poslavskaia, N. A., and M. M. Moskvin

1960. Echinoids of the Order Spatangoida in Danian and Adjacent Deposits of Crimea, Caucasus, and the Transcaspian Region. International Geological Con-

gress 21st Session, Reports of Soviet Geologists, 5:47-82, figures 1-29, plates 1-8.

Ravn, J.P.J.

1927. De irregulaere echinider i Danmarks kridtassejringer.

Mémoires de l'Académie Royale des Sciences et des

Lettres de Danemark, Copenhagen, Section des

Sciences, (8)11(4):309-354, figures 1-5, plates 1-5.

1928. De regulaere Echinider i Danmark's Kridtaslejringer.

Museum de Minéralogie et de Géologie de l'Université de Copenhague, Communications Paléontologiques, 29:1-62, figures 1-12, plates 1-6.

Regnéll, G.

1955. Catopygus (Echinoidea) als Geschiebe im Quartär Schonens. Skrifter Fran Mineralogisk-och Paleontologisk-Geologiska Institutionerna Lund N:R 24. Geologiska Föreningens I Stockholm Förhandlingar, 77(1):17-32, plate 1.

1956. Silurian Echinoids from Gotland. Arkiv för Mineralogi och Geologi, 2(7):155-178, figures 1-4, plates 1-4.

Reguant, S., J. Roman, and J. Villatte

1970. Échinides de l'Éocène moyen de la région de Vic (Barcelone). Bulletin de la Société Géologique de France, (7)12(5):894-912, figures 1-5, plates 33-34.

Reidl, G.

1941- Über eine neue Spatangidenart Plagiobrissus abeli 1942. nov. spec. aus dem Torton von Müllendorf (ehem. Burgenland). Berichte der Reichsstelle für Bodenforschung, 1941:24-29, figures 1-2.

Renngarten, V.

1926. La faune des dépôts crétacés de la région d'Assa-Kambiléevka, Caucase du Nord. Mémoires du Comite Géologique, (new series) 147:1-132, plates 1-9.

Rey, J.

1966. Sur un Échinide nouveau de l'Hauterivien portugais, Holectypus almeidae. Bulletin de la Société d'Histoire Naturelle de Toulouse, 102(1):295-300, figures 1-2, plate 1.

Richards, E. F.

1947. Mesozoic Fossils of the Peruvian Andes, II: Echinoidea, Pelecypoda, and Gastropoda. The Johns Hopkins University Studies in Geology, 15:29-80, plates 1-12.

Richards, G. L.

1935. Revision of Some California Species of Astrodapsis.

Transactions of the San Diego Society of Natural
History, 8(9):59-66, plate 7.

Richards, H. G.

1962. New Cretaceous Invertebrate Fossils from Test Borings in New Jersey. In The Cretaceous Fossils of New Jersey. New Jersey Bureau of Geology and Topography Paleontological Series, Bulletin 61(2), Appendix C:199-207, plates 92-94. [Revision of report on "Cretaceous Paleontology of New Jersey" by Stuart Weller in Volume 4, Paleontology Series of Geological Survey of New Jersey, 1907.]

Roché, P.

1939. Aalénien et Bajocien du Maconnais et de quelques régions voisines. Travaux du Laboratoire de Géologie de la Faculte des Sciences de Lyon, 35(29):1-355, figures 1-12, plates 13.

Roman, J.

1952. Sur les structures internes de Clypéastres. Bulletin de la Société Géologique de France, (6)2:403-416, figure 1.

1965. Morphologie et évolution des Echinolampas (Échinides Cassiduloïdes). Mémoires du Museum National d'Histoire Naturelle, 15C:1-341, figures 1-136, plates 1-10.

1968a. Duperieria nov. gen. (Échinide Holectypoïde Echinonéidé) dans le Lutétien de Biarritz (Basses-Pyrénées). (Abstract.) Compte Rendu Sommaire des Séances de la Société Géologique de France, 3:103.

1968b. Duperieria nov. gen. (Échinide Holectypoïde Échinonéidé) dans le Lutétian de Biarritz (Basses-Pyrénées). Bulletin de la Société Géologique de France, (7)10:120-125, plate 5.

Roman, J., and P. Debant

1962a. Baueria tessieri nov. sp. (Arbaciidae) Échinide Nouveau du Danien de Popenguine (Sénégal). Compte Rendu Sommaire des Séances de la Société Géologique de France, 8:245.

1962b. Baueria tessieri nov. sp. (Arbaciidae) Échinide nouveau du Danien de Popenguine (Sénégal). Bulletin de la Société Géologique de France, (7)4:590-593, figure 1, plate 22b.

Roman, J., and F. Gonçalves

1965. Échinides du Crétacé et du Miocène de Moçambique. Garcia de Orta, 13(2):267-278, figures 1-4, plates 1-2.

Roman, J., and A. Gorodiski

1959. Échinides Éocènes du Sénégal. Notes du Service de Géologie et de Prospection Minière (Dakar), 3:1-91, plates 1-3, tables, maps.

Rouchadzé, J.

1940. Les Échinides supracrétacés de la Georgie. Bulletin de Musée de Georgie, 10A:81-138, 139-159, 160-182, figures 1-22, plates 1-3.

Saez, M. D. de - See De Saez, M. D.

Sahni, M. R.

1955. Recent Researches in the Palaeontologic Division, Geological Survey of India. *Current Science*, 24(6): 187-188.

Sahni, M. R., and N. C. Bhatnagar

1958. New Fossils from the Jurassic Rocks of Jaisalmer, Rajasthan. Records of the Geological Survey of India, 87(2):418-437, plates 3-4.

Sánchez Roig, M.

1926. Contribucion a la Paleontologia Cubana: Los Equinodermos Fosiles de Cuba. Boletin de Minas, 10:1-179, plates 1-43.

1949. Los equinodermos fosiles de Cuba. Paleontologia Cubana, 1:1-330, plates 1-50.

1951. Faunula de Equinodermos fosiles del Terciario, del termino municipal de Moron, Provincia de Camagüey. Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey", 20(2):37-64, plates 23-40.

1952a. El genero Cubanaster (Equinidos fosiles irregulares). Torreia, 16:3-8, plates 1-3.

1952b. Nuevos generos y especies de Equinoideos fosiles Cubanos. Torreia, 17:1-18, plates 1-9.

- 1952c. Nuevos generos y especies de equinodermos fosiles Cubanos. Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey," 21(1):1-30, plates 1-15.
- 1952d. Paleontologia Cubana: Revision de los Equinodermos Fosiles del Grupo Cassiduloida. Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey," 21(1):47-57, plates 16-17.
- 1952e. Revision de los Clypeasteridos Cubanos. Revista de Agricultura:118-155, plates 1-16.
- 1953a. Algunos Equinoideos fosiles Cubanos. Revista de Agricultura:53-67, plates 1-21.
- 1953b. Dos nuevos géneros de Equinoideos cubanos: Lambertona y Neopatagus. Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey," 21(3): 257-262, plates 27-29.
- 1953c. Nuevos equinoideos fosiles de Cuba. Anales de la Academia de Ciencias Medicas, Fisicas y Naturales de la Habana, 91(2):135-176, plates 1-12.

Sándor, M.

1969. Tortonai echinodeák a Kerepesi úti csatornázás Feltárásábol. Földtani Közlöny (Bulletin of the Hungarian Geological Society), 99(3):253-257, figures 1-2, plates 1-2.

Sapundzhieva, V.

1964. Paléogène-Echinoidea. Fosilite Na Bulgaria (Les Fossiles de Bulgarie), 6B:1-64, plates 1-24.

Schaffer, H.

- 1960. Interessante obereozäne Echinidenarten, aus Bruderndorf (N.-O.) und Oberitalien. Sitzungsberichte Österreichische Akademie der Wissenschaften, (Abstract I)169(9/10):423-435, figures a-g.
- 1961. Brissus (Allobrissus) miocaenicus, eine neue Echinidenart aus dem Torton von Mühlendorf (Burgenland). Sitzungsberichte Österreichische Akademie der Wissenschaften, (Abstract I)170(3/4):149-157, figures 1a-d, plates 1-2.
- 1962. Die Scutelliden des Miozäns von Österreich und Ungarn. *Paläontologische Zeitschrift*, 36(3/4):135–170, figures 1–11, plates 15–19.

Schauroth, K. von

1859. Kritisches Verzeichniss der Versteinerungen der Trias im Vicentinischen. Sitzungsberichte Kaiserlichen Akademie der Wissenschaften Wien, Mathematisch-Naturwissenschaftliche Classe, 34(1):283-356, plates 1-3.

Schenck, H. G.

1928. A New Echinoid from the California Eocene. Transactions of the San Diego Society of Natural History, 5(12):195-202, plate 24.

Schmidt, O.

1938. Upper Cretaceous Marine Echinoids of Caucasus: Genus Pseudoffaster Lambert. Annals of the Central Geological and Prospecting Scientific Research Museum, 1:75-83, plates 24-26.

Schmidt, O. I., and V. N. Vereshchaghin

1960. Stratigraphy and Sea Urchin Fauna of the Upper Cretaceous Deposits of Northern Sikhote Alin.

Trudy Vsesouizniyi neftianoi naucho-issbdovatelskii geolo-razvedochnyi institut, 154:226-230, figure 1, plate 1.

Schmitz, E.

1970. Ein interessanter Cidarisstachel im Feuersteingeschiebe. Meyniana, 20:37-38, plate 1.

Scott, G.

1926. Études stratigraphiques et paléontologiques sur les terrains crétacés du Texas. 218 pages, 3 plates. Thesis, University of Grenoble.

Seneš, J.

1955. Stratigraphische und biofazielle untersuchung einiger neogener sedimente der Ostslowakei auf grund der Makrofauna. Geologické Práce, Slovenská Akádemia Vied, 40:1-171, plates 1-10.

Serafy, D. K.

1970. A New Species of Clypeaster from the Gulf and Caribbean and a Key to the Species in the Tropical Northwestern Atlantic (Echinodermata: Echinoidea).

Bulletin of Marine Science, 20:662-677, 7 figures, 2

Serra, G.

- 1932. Su di una nuova species di "Schizaster." Atti della Reale Accademia Nazionale dei Lincei, Rendiconti, (6)15(11):888-893, figure 1.
- 1935. Descrizione di alcuni echinidi dei giacimenti fosfatici della Tripolitania. Bollettino della Società Geologica Italiana, 54(1):121-126, plate 5.

Shalem, N.

1933. Sopra un giacimento cenomaniano a Brachiopodi in Palestina. Rivista Italiana di Paleontologia, 39:17-28, plate 2.

Shibata, M.

1960. Two New Species of Kewia from Japan. Transactions and Proceedings of the Palaeontological Society of Japan, 39:307-310, figures 1-4, plate 35.

Smiser, J. S.

- 1935a. A Revision of the Echinoid Genus Echinocorys in the Senonian of Belguim. Mémoires du Musée Royal d'Histoire Naturelle de Belgique, 67:1-52, figures 1a-25c, plates 1-2.
- 1935b. A Monograph of the Belgian Cretaceous Echinoids.

 Mémoires du Musée Royal d'Histoire Naturelle de
 Belgique, Mémoire 68:1-98, plates 1-9.
- 1936. Cretaceous Echinoids from Trans-Pecos Texas. Journal of Paleontology, 10(6):449-480, 1 figure, plates 63-67.

Soares, A. F., and A. Devriès

1967. Un genre nouveau de la famille des Pericosmidae dans le Crétacé du Portugal. Memórias e Noticias, 63:1-11, figures 1-2, plate 1.

Socin, C.

- 1942. Nota preliminare sulla fauna echinologica dell'Oligo-Miocene somalo. Atti della Reale Accademia delle Scienze di Torino, 77(1):47-56.
- 1946. Fossile eocenico con iscrizione geroglifica rinvenuto in Eliopoli. Atti della Società Toscana di Scienze Naturali, Memorie 53:163-171, figure 1.

Solovjev, A. N., and O.G. Melikov

1963. Turanglaster, a New Echinoid Genus from the Upper Cretaceous of Turkmenia and Azerbaijan. Paleontologicheskii Zhurnal, 1-2:105-110, figure 1, plate 10.

Somos, L., and J. Kókay

1960. Geologische Beobachtungen im Lias und Miozän des Mecsekgebirges. Földtani Közlöny, 90(3):331-347, figures 1-10, plates 16-17.

Spreng, A. C., and W. B. Howe

1963. Echinoid Jaws from the Mississippian and Pennsylvanian of Missouri. Journal of Paleontology, 37(4): 931–938, figures 1–6.

Stainbrook, M. A.

1937. New Echinoderms from the Devonian Cedar Valley Formation of Iowa. The American Midland Naturalist, 18(5):899-904, plate 1.

Stchépinsky, V.

1943a. Gaziantep deniz oligoseni (cenup Türkiye)-L'oligocène marin de Gaziantep (Turquie méridionale). Maden Tetkik ve Arama Enstitusu Mecumasi (Ankara), 2/30(7-8):223-235, plates 1-4.

1943b. Gaziantep Deniz Oligoseni (Cenup Türkiye). Maden Tetkik ve Arama, (8)30:223-235, plates 1-4.

Stearn, C. W.

1956. A New Echinoid from the Upper Devonian of Alberta. Journal of Paleontology, 30(3):741-746, figures 1-2, plate 81.

Stefanini, G.

1923. Il retico nei dintorni di Selvena (Siena) e i suoi fossili. Bolletino della Società Geologico Italiano, 42:48-57, plate 5.

1928. Echinidi mesozoici del Caracorùm. Spedizione Italiana de Filippi, (2)6:151-186, plates 19-21.

1932. Echinodermi, Vermi, Briozoi e Brachiopodi del Giuralias della Somalia (in Palaeontologia della Somalia). Palaeontographia Italica, (new series) 32(2): 1-141, figures 1-10, plates 4-8.

Stephenson, D. G.

1968. Some Miocene Cidaridae (Echinoidea) from Kenya. Journal of Natural History, 2(4):553-568, figures 1-2. Stephenson, L. W.

1928[1927]. Additions to the Upper Cretaceous Invertebrate Faunas of the Carolinas. Proceedings of the United States National Museum, 2706, 72 (10), article 10:1-25, plates 1-9.

1936. Geology and Paleontology of the Georges Bank Canyons, Part II: Upper Cretaceous Fossils from Georges Bank (Including Species from Banquereau, Nova Scotia). Bulletin of the Geological Society of America, 47:367-410, plates 1-5.

The Larger Invertebrate Fossils of the Navarro Group of Texas, The University of Texas Publication, 4101:1-641, figures 1-13, plates 1-95.

Stockley, G. M.

1927. Neogene Echinoidea from the Zanzibar Protectorate, Based Mainly on the Collection Made by G. M. Stockley, A.R.C.S., D.I.C., F.G.S., Government Geologist, 1925-26. Pages 103-117 In Report on the Palaeontology of the Zanzibar Protectorate. Government of Zanzibar.

Strausz, L.

1925. Újabb adatok Fót alsómediterrán faunájákoz: Neuere daten zur untermediterranen fauna von Fót. Földtani Közlöny, 55(1-12):212-217, 367-369, figure 24.

Szörényi, E.

1953. Moizäne Echinoiden aus den westlichen teilen der Ukraine. Geologica Hungarica, (Series Palaeontologica), 23:1-104, plates 1-8.

Einiges über Mitglieder der familie Spatangidae 1963. (Echinoidea). Paläontologische Zeitschrift, 37:185-

197, plates 14-15.

1966. Laticlypus giganteus n. gen. n. sp. (Echinoidea) des assises Jurassiques de la Montagne Bakony. Acta Geologica, Academiae Scientiarum Hungaricae, 10(3/4):445-452, figures 1-5.

Tanaka, K.

1965. Cretaceous Echinoids from the Sanchu Graben, Central Japan. Transactions of the Proceedings of the Paleontological Society of Japan (new series), 59:126-142, figures 1-7, plates 15-16.

Tanaka, K., and M. Okubo

1954. On Some Echinoids from the Paleo-Cretaceous of the Yuasa District in the Kii Peninsula and of the Yatsushiro District in Kyushu. The Journal of the Geological Society of Japan, 60(705):215-227, figures 1-7, plate 7.

Tanaka, K., and M. Shibata

1961. A New Species of Aphelaster from the Lower Cretaceous of Japan. Translation of the Proceedings of the Paleontological Society of Japan (new series), 42:68-72, figures 1-2, plate 10.

Tauber, A. F.

1951. Tripneustes ventricosus austriacus nov. ssp., ein tropischer Seeigel aus dem Torton des Wiener Beckens. Sitzungsberichte, Österreichische Akademie der Wissenschaften, (Abstract I)160(3/4):303-320, figures 1-4, plate 1.

Tavani, G.

1946. Fossili eocenici della Cirenaica. Memorie, Atti della Società Toscana di Scienze Naturali, 53:172-187, figures 1-2b.

Termier, G., and H. Termier

1950. Paléontologie Marocaine II. Invertébrés de l'Ére Primaire, 4: Annélides, Arthropodes, Echinodermes, Conularides, et Graptolithes. Notes et Mémoires, Protectorat de la République Française au Maroc, Direction de la Production Industrielle et des Mines, Division des Mines et de la Géologie, Service Géologique, 79(4):1-264, plates 184-239.

Thiéry, P.

1928. Consideration phylogéniques sur les Cidaridae. Archives de Zoologie Expérimentale et Générale, 67(4):179–181.

Thiéry, P., J. Lambert, and M. Collignon

1928. Note sur quelques échinides de la région de la Voulte. Travaux du Laboratoire de Géologie de la Faculté des Sciences de Lyon, 13(11):81-103, figure 11, plate 21.

Thirring, J. T.

1936. Paläontologische Neuigkeiten aus dem Bakony-Gebirge. Földtani Közlöny, 66(1-3):51-68, figure 15, plates 1-2.

Thomas, A. O.

1924. Echinoderms of the Iowa Devonian. Iowa Geological

Survey, Annual Reports 1919-1920, 29:385-552, 21 figures, plates 35-54.

Tommasi, L. R.

1958. El genero Astropyga Gray, neuvo para America del Sud. Neotropica, 4(15):85-87, figures 1-4.

Tortonese, E.

1932. Nuova specie di Echinoide del Mar Rosso (Paraster erythraeus n. sp.). Bollettino dei Musei di Zoologia e di Anatomia comparata della R. Università di Torino, (3)42(19):1-6, figures 1-9.

Traub, F.

1938. Geologische und paläontologische Bearbeitung der Kreide und des Tertiärs im Östlichen Rupertiwinkel, nördlich von Salzburg. Palaeontographica, Beiträge zur Naturgeschichte der Vorzeit, 88A:1-114, 2 figures, plates 1-8.

Twenhofel, W. H.

1924. The Geology and Invertebrate Paleontology of the Comanchean and "Dakota" Formations of Kansas. State Geological Survey of Kansas, Bulletin 9:135 pages, 23 plates.

Tzaghareli, A.

1949. The Upper Cretaceous Fauna of Georgia. Académie des Sciences de la RSS Géorgienne, (Serie Géologique), 5(10):173-274, figures 1-4, plates 13-16.

Tzankov, V.

1930. Géologie du plateau de Sumen et ses environs immédiats. Zeitschrift der Bulgarischen geologischen Gesellschaft, 2(1):1-77, figures 1-4.

1934. Échinides fossiles de la Craie supérieure de Bulgarie de Nord. Annuaire de l'Université de Sofia, 30(3): 189-233, plates 1-5.

Vautrin, H.

1933. Les Échinides Burdigaliens de la zone désertique syrienne. Haut-Commissariat de la République Française en Syrie et au Liban, Notes et Mémoires, 1:101-115, plates 11-12.

Venzo, S.

1933. Di alcuni fossili Oligocenici del Trentino e del Veronese. Bollettino della Società Geologica Italiana, 52:207–216, plate 12.

1934a. Di alcuni Echinodermi dell'Eocene dell'isola di Rodi. Bollettino della Società Geologica Italiana, 53(1): 121-132, plate 12.

1934b. Il Ladinico superiore dell'Isola di Rodi (Egeo), II: La fauna. *Palaeontographia Italica*, 34:137-170, figures 1-2, plate 13. Pisa.

1935. I:Fossili del Neogene Trentino, Veronese e Bresciano, II: Cefalopodi, Gasteropodi, Scafopodi, Echinidi e Celenterati—Conclusioni. *Palaeontographia Italica*, 35:201–255, plates 17–19.

Via, L., and J. Padreny

1970. Dos nuevas especies de Clypeaster del Eoceno de Cataluña. Instituto de Investigaciones Geológicas de la Diputación Provincial, Universidad de Barcelona, 24:89-97, figures 1-3.

Vialov, O.

1930. Sur les échinides réguliers des dépôts mésozoiques du Grand Balkhan (Turkmenia). Bulletin of the

Geological and Prospecting Service of U.S.S.R., 49:867-904, plates 1-2.

Vialov, O., and O. Manouilenko

1939. Les oursins paléogènes du Fergana. Problems of Paleontology, Publications of the Laboratory of Paleontology (Moscow University), 5:147-176, plates 1-3.

Vidal, D.L.M.

1921. Contribución a la paleontologia del cretácico de Cataluña. Memorias de la Real Academia de Ciencias y Artes de Barcelona, 17(2):1-21, figures 1-4, plates 1-8.

Villatte, J.

1966a. Porpitella paleocaenica nov. sp., échinide nouveau de l'Éocène inférieur de l'Ariège. Bulletin de la Société d'Histoire Naturelle de Toulouse, 102:517-520, plate 1.

1966b. Recherches sur quelques Conoclypus de l'Éocène d'Espagne. Bulletin de la Société Géologique de France, (7)7(6):866-870, figures 1-3, plates 34-35.

Vogl, V.

1921. Nouvelles notices sur les échinides éocènes de la Hongrie. Földtani Közlöny (Geologische Mitteilungen), 50:128.

Vredenburg, E.

1922. Oligocene Echinoidea Collected by Rao Bahadur S. Sethu Rama Rau in Burma. Records of the Geological Survey of India, 54:412-415, plate 30.

Wagner, C. D., and J. W. Durham

1964. Dixonia, a New Genus of Echinoids. Journal of Paleontology, 38(1):170.

Wanner, J.

1941. Neue Beiträge zur Kenntnis der permischen Echinodermen von Timor, XV: Echinoidea. *Palaeontographica*, 4:297-314, 3 figures, plates 25-26.

Wanner, J., H. C. G. Knipscheer, and E. Schenk

1952. Zur Kenntnis der Trias der Insel Seran (Indonesien). Eclogae Geologicae Helvetiae, 45(1):54-84, figures 1-3, plates 3-4.

Warren, P. S.

1926. A Marine Fauna in the Birch Lake Sandstone, Alberta. Transactions of the Royal Society of Canada, (3)20(4):9-14, plate 1.

Weaver, C. E.

1931. Palaeontology of the Jurassic and Cretaceous of West Central Argentina. Memoirs of the University of Washington, 1:1-469, plates 1-62.

1942. Paleontology of Marine Tertiary Formations of Oregon and Washington, Part I. University of Washington Publications in Geology, 5(1):1-268, plates 3-4.

Weber, G.

1934. Échinoidea du Jurassique et du Crétacé de Crimée
—I. Transactions of the United Geological and
Prospecting Service of U.S.S.R., 312:1-99, figures
1-10, plates 1-12.

Weisbord, N. E.

1934. Some Cretaceous and Tertiary Echinoids from Cuba. Bulletins of American Paleontology, 20(70C):1-270, plates 1-9.

Witney, M. I., and L. B. Kellum

1966. Echinoids of the Glen Rose Limestone of Texas.

Papers of the Michigan Academy of Science, Arts
and Letters, 51:241-263, figure 1, plates 1-2.

Wind, J.

1954. Tylocidaris Piggene som Ledeforsteninger i vort øvra Senon og Danien. Meddelelser fra Dansk Geologisk Forening, 12:481-486, plates 12-13.

1959. Echinocorys formerne og deres stratigrafiske Udbredelse i det overste Kridt i Danmark. Meddelelser fra Dansk Geologisk Forening, 14(2):122-131, plates 1-4.

Wolburg, J.

1933. Das Devon im Gebiet der oberen Lenne. Abhandlungen der PreuBischen Geologischen Landesanstalt, 151:1-70, figures 1-10, plates 1-3.

Woodring, W. P., S. Stewart, and R. W. Richards

1940. Geology of the Kettleman Hills Oil Field, California.

United States Geological Survey Professional Paper,
195:1-170, figures 1-15, plates 1-57.

Wright, C. W.

1967. Notes on Cretaceous Saleniidae. Proceedings of the Geological Association of Canada, 78(1):9-25, figures 1-2, plates 1-2.

Wright, C. W., and E. V. Wright

1949. The Cretaceous Echinoid Genera Infulaster Desor and Hagenowia Duncan. The Annals and Magazine of Natural History, (12)2(18):454-474, figures 1-18.

Yakovlev, N.

1939. Echinodermata in Gorsky, I. 5: The Middle and Upper Carboniferous. The Atlas of the Leading Forms of the Fossil Faunas of U.S.S.R., The Central Geological and Prospecting Institute, 5:64-70, plates 11-13.

Zachos, L. G.

1968. A New Echinoid from the Ocala Limestone.

Quarterly Journal of the Florida Academy of
Sciences, 31(3):161-164, figure 1.

Zammit-Maempel, G.

1969. A New Species of Coelopleurus (Echinoidea) from the Miocene of Malta. Palaeontology, 12(1):42-47, figure 1, plate 6.

Zázvorka, V.

1952. Trematopygus nováki sp. n. (Echinoidea) from the Upper Cretaceous of Bohemia. Mémoires de la Société Royal des Lettres et des Sciences de Bohême, 11:1-5, 4 figures, 1 plate.

Zoeke, M.-E.

1952. Heterosalenia alloiteaui nov. sp. du Jurassique moyen du Liban Nord et un cas de croissance excessive de plaques arrêtant le développement des zones ambulacraires. Bulletin de la Société Géologique de France, (6)2:249-252, figures 1-2, plate 11b.

Zullo, V. A., R. F. Kaar, J. W. Durham, and E. C. Allison
1964. The Echinoid Genus Salenia in the Eastern Pacific.
Palaeontology, 7(2):331-349, figures 1-6, plate 56.

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